

M.Sc. Programme
"Management of Protected Areas"

THE "SITTING ON THE SHELF" SYNDROME

A SURVEY ON THE CRUXES FOR IMPLEMENTING PROTECTED AREAS' MANAGEMENT PLANS

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Declaration of Honour

I herewith declare that I am the sole author of the current master thesis according to art. 51 par. 2 no. 8 and art. 51 par. 2 no. 13 Universitätsgesetz 2002 (Austrian University Law) and that I have conducted all works connected with the master thesis on my own. Furthermore, I declare that I only used those resources that are referenced in the work. All formulations and concepts taken from printed, verbal or online sources – be they word-for-word quotations or corresponding in their meaning – are quoted according to the rules of good scientific conduct and are indicated by footnotes, in the text or other forms of detailed references.

Support during the work including significant supervision is indicated accordingly.

The master thesis has not been presented to any other examination authority. The work has been submitted in printed and electronic form. I herewith confirm that the electronic form is completely congruent with the printed version.

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Table of Contents

1 Summary.....	4
2 Introduction.....	5
2.1 Protected areas and management planning.....	5
2.2 Implementation of management plans	7
2.3 Brazilian context	8
2.4 Pre-assumptions and research questions	10
3 Methods	12
3.1 Literature review	12
3.2 Quantitative interviews	13
4 Why are the management plans "sitting on the shelf"?.....	16
4.1 Direct causes	18
4.2 Indirect causes	25
4.3 Actual situation at Brazilian National Parks.....	33
5 Bringing the plan from shelf to desk	42
5.1 Overall recommendations	42
5.2 Identifying particular challenges	44
5.3 Further investigation.....	45
6 Conclusion.....	46
7 References	47
7.1 Literature	47
7.2 Internet Resources.....	47
List of Figures.....	50
List of Tables	51
Appendix	52

1 SUMMARY

For the sake of biodiversity conservation, protected areas are the current best and accepted strategy. Nevertheless its conservation goals can be only achieved through efficient management, which must be guided by a proper planning process and sequential tool, called management plan. For that, principles and structure were already established and are used for promoting a better development of this tools and its application on the areas' day-to-day management.

However, the implementation of theses documents is still a worldwide issue, managers and experts continue to struggle for putting in practice whatever is planned on these papers and most are not successful despite the big effort and amount of money invested on these processes of planning elaboration, resulting in a "sitting on the shelf" syndrome.

Although the issue is well know there is not much literature discussing it in depth and providing answers and/or solution for the encountered problems. This survey was done aiming to gather information on the cruxes for management plan's implementation for a better understanding of the issue, thus to provide suggestions on how to deal with that and finally help moving these documents from the shelf to the manager's desk

Few papers that deal specifically, in total or partially, with the topic were identified and analysed on this research as a literature review of international range; the managers point of view were also used for a comparison with the references and to explicit management plans implementation current situation through a quantitative questionnaire applied to the staff of Brazilian National Parks.

At last it is offered a group of principles that should be considered while elaborating and implementing management plans, a tool as a basis for identifying specific challenges of planning documents and further research recommendation.

2 INTRODUCTION

2.1 Protected areas and management planning

Protected Areas may not be the ideal solution for biodiversity conservation as the change of the overall mentality and attitude towards the use of natural resources and the landscape management, associated to consumption pattern, is the real issue that should be faced in order to secure habitats for other species but humans (Jeffrey McNeely cited in Meyers, 2002 in Besunsan, 2006).

Therefore, these "geographically defined area, which is designated or regulated and managed to achieve specific conservation objectives" as defined by the Article 2 of the Convention on Biological Diversity - CDB (1992) and also recommended by its treaty, are currently considered one of the best strategies to guarantee the protection against accelerated predatory praxis on remained nature while slowly the societies (maybe) take account on the problem and its urgency. Moreover, these sites have a very important role on this process as head of economic and social changes (Besunsan, 2006) if effectively implemented.

However, protected area's effective implementation is such a difficult and worldwide challenge that there is the "Paper Park" jocularly designation spread all over the earth for classifying these sites that were established by official acts but not implemented and sometimes not even properly delimited. Even worse, these areas existence can contribute to mask the need of new grounds for biodiversity conservation as they use to be counted as an accomplished mission by itself (Terborgh, 2002; Besunsan, 2006).

Because of that, the Target 11 from the Aichi Targets¹ was designed addressing directly the establishment and management of protected areas and on its Clause 5 it assigns the success of theses sites in maintaining biodiversity is closely linked to management effectiveness, integration with surrounding development context and local support (CDB, 2010a; Woodley, 2012). Furthermore, the Programme of Work on Protected Areas - PoWPA on its goal 1.4 summon for effective managed protected areas by 2010 (terrestrial) and 2012 (marine), guided by adequate management plans (CDB, 2010b; Woodley, 2012; Bertzky, 2012), which elaboration process should consider:

"1.4.1 Create a highly participatory process, involving indigenous and local communities and relevant stakeholders, as part of site-based planning in accordance with the ecosystem approach, and use relevant ecological and socio-economic data required to develop effective planning processes;

¹Group of 20 targets to achieve global biodiversity conservation outlined by the Convention on Biological Diversity Strategic Plan for Biodiversity 2011-2020 and adopted at the 10th Conference of the Parties (COP) in Nagoya, Japan.

- 1.4.2 Identify appropriate measurable biodiversity conservation targets for sites, drawing on criteria laid out in Annex I to the Convention on Biological Diversity and other relevant criteria;
- 1.4.3 Include in the site-planning process an analysis of opportunities for the protected area to contribute to conservation and sustainable use of biodiversity at local and regional scales as well as an analysis of threats and means of addressing them;
- 1.4.4 As appropriate, but no later than 2010, develop or update management plans for protected areas, built on the above process, to better achieve the three objectives of the Convention;
- 1.4.5 Integrate climate change adaptation measures in protected area planning, management strategies, and in the design of protected area systems;
- 1.4.6 Ensure that protected areas are effectively managed or supervised through staff that are well-trained and skilled, properly and appropriately equipped, and supported, to carry out their fundamental role in the management and conservation of protected areas." (CDB, 2010b)

Accordingly, all protected areas should own a management plan, defined by Thomas and Middleton (2003) as a document, which sets out the management approach and goals, together with a framework for decision making, to apply in the protected area over a given period of time". In other words, in order to achieve its conservation objectives, it must be administrated through operative tactics and be ought to experience a thought process during its preparation (IUCN, 1994; Thomas and Middleton, 2003).

This process can be very complex depending on several factors and planning basics are necessary for the purpose of orient and assure an accurate and effective plan; this is the role of IUCN guidelines which was developed from best practice initiatives all over the world and offer a framework to be considered by protected area professionals when adjusted to their demands (Thomas and Middleton, 2003).

It is also important to follow principles when developing a management plan and the currently endorsed ones by The Convention on Biological Diversity are from the Ecosystem-based approach or Ecosystem Management (CDB, 2005). Described by Meffe *et al.* (2002) as an evolution on natural resources management that is a continuous process promoted by new ideas and experiences and also can rise from gridlock.

The Ecosystem Management aims the integration of ecological, economic, social and institutional views; the use of natural geographic scale rather than political ones; long-term perspectives; and adaptive management approach (Meffe *et al.*, 2002). The last point, an old concept, better disseminated in business field, which has been identified as a prospective structure in dealing with such complex

task as natural resources management and because of that is being largely incorporated and recommended within the protected areas network (Stankey et al., 2005).

2.2 Implementation of management plans

Despite the high recommendation and exposed reasons, management plan elaboration is a big worldwide issue as well as its successful implementation (Thomas and Middleton, 2003; Alexander, 2013). Kohl (2002) comes to sort out the implementation problem as "if not a crises, at least a mystery" (own translation); as many sites are managed without plans and many plans are unused, "forgotten on shelves" (Alexander, 2013).

"By far the most common situation is that [general management and development] plans tend to gather dust or at best receive minimal implementation, despite the tremendous national (and frequently international) technical co-operation efforts which go into their preparation." (Budowski and MacFarland, 1982 in Thomas and Middleton, 2003)

Many authors agree there are weaknesses found in protected area's planning that should be faced in order to develop a document amenable of implementation and for that few researches were realized and some guidelines were offered aiming to increase the quality of plans (Kohl, 2002; Terborgh, 2002; La Chapelle *et al.*, 2003; Lane, 2003; Thomas and Middleton, 2003; Besunsan, 2006; Robles *et al.*, 2007; Zeller, 2008; Alexander, 2013), in consequence to effectively use it and by that to attain these sites conservation goals.

Besunsan, 2006 states there is a biggest will on establishing protected areas than on implementing it, considering the political representativeness of the formal act more than the silent and long process of implementation. For that Dourojeanni (2003) put into question if for the sake of conservation the proper attitude is to create new protected sites or consolidate the existent ones.

Besunsan, 2006 also believes the lack of planning implementation can be due resources limitation while Terborgh, 2002 lists resources as a problem among others, agreeing that investment is important but much effort is need for making it happen, much learning by experience as well, in a process of try, evaluate and correct.

Zeller (2008), after evaluating 14 planning documents, claimed they were not useful for the protected areas management, especially because they were not integrated to local reality and were disbelieved by their users. Either way, the existent awareness on the issue leads to an effort in trying different planning models instead fulfilling the knowledge gap on understanding the implementation barriers as a first step (La Chapelle *et al.*, 2003).

2.3 Brazilian context

"Brazil's status as megadiverse country confers a major global responsibility to protect three biodiversity wilderness areas - the Amazon, Pantanal, and Caatinga - and two biodiversity hotspots - the Atlantic Rain Forest and the Cerrado. Protected areas are the key to conserving what remains." (Rylands and Brandon, 2005)

In Brazil there are 1.762 protected areas distributed within Federal, State and Municipal level (MMA, 2013). And although management plan is an official document declared by the National System of Protected Areas – SNUC², by February 2014 there were 313 protected areas under the Federal administration by means of the Chico Mendes Institute for Biodiversity Conservation - ICMBio³, 138 (44%) owing management plans what features a dissonance to the law as 175 (56%) protected areas are missing the document (ICMBio, 2013).

The SNUC stipulates 5 years deadline for elaborating the protected area's management plan after their establishment but in some cases it took more than 10 years elaboration process (Besunsan, 2006; ICMBio, 2013). Besides that some of the existent papers can be considered out of date, as there are ranges of up to 36 years from their elaboration with the oldest document dating from 1978 (ICMBio, 2013). The figure 1 displays the number of Federal protected areas with management plans over the years.

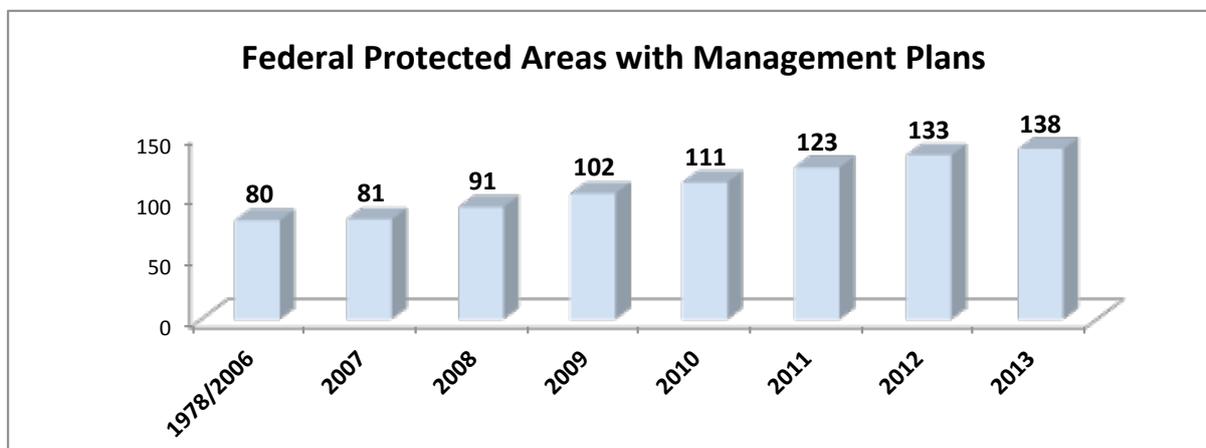


Fig. 1: Number of Brazilian Federal protected areas with management plans over the years (ICMBio, 2013)

Back in the 70s it was realized by those who were involved in protected area's establishment in Brazil these delimited spaces require more than borders for effective conservation of natural resources but effective management and tools

²Law 9.985 of 19th of July of 2000 that defines and regulates protected area categories at federal, state and municipal levels, sorting them in: conservation units of indirect use (strictly protected) and conservation units of direct use (sustainable use).

³Brazilian federal agency in charge of protected areas' administration from 2007 to the present day.

for its implementation. In 1976 a document of reference for national park's planning and management was elaborated by the ⁴Brazilian Institute for Forestry Development - IBDF, followed by a draft of a plan content in 1977 and finally, in 1978 and 1979, four Brazilian protected areas had their management plans published (Simas-Pereira, 2009).

Shortly thereafter the Decree 84.017 of 21st of September of 1979 brought the legal milestone for national park's management planning elaboration, turning it mandatory and systematizing the landscape's zoning, equating planning to creation with regard to the importance of a protected area establishment (*ibid.*).

After that, two guidelines were drawn up for protected area's planning, both under the ⁵Brazilian Institute for the Environment and Renewable Natural Resources - IBAMA competence: the *Methodological Guidelines for Planning of Protected Areas of Indirect Use*, jointly with the German Federal Enterprise for Technical Cooperation - GTZ⁶ (IBAMA, 1996) as part of the Intergovernmental Agreement on Technical Cooperation Brazil-Germany; and the *Methodological Guidelines for Planning: National Parks, Biological Reserves and Ecological Stations* (Galante *et al.*, 2002), a review on the first one which was done specially due required adaptations demanded by the SNUC law. The second document is the guidelines in actual use by ICMBio (*ibid.*).

The aforementioned guideline in use was built to attend protected areas of indirect use but there are specific guidelines for protected areas of direct use, as it is considered planning should be distinct between both categories. And according to its content, management planning has the following goals:

- "To lead the protected area to accomplish its objectives established on its creation;
- To define specific management goals in order to guide the protected area management;
- To provide directives for the protected area development;
- To set specific actions for the protected area management;
- To promote de protected area management based on available or generated knowledge;
- To differentiate according to use intensity the protected area zoning aiming to protect its natural and cultural resources;
- To highlight the representativeness of the protected area within the SNUC in view of the valuation of its resources attributes to fit biomes, conventions and international certifications;
- To establish, when appropriated, specific regulation to match the presence of local residents with the protected

⁴Brazilian federal agency in charge of protected areas' administration, along with the Special Secretariat for the Environment - SEMA, from 1967 to 1989.

⁵Brazilian federal agency in charge of protected areas' administration from 1989 to 2007.

⁶Actual German Federal Enterprise for International Cooperation - GIZ.

- areas' goals, until the compensation and relocation is possible;
- To establish regulation for occupation and land use of buffer zones and corridors aiming the protected area protection;
 - To promote social and economic integration among the protected area and its surrounding communities." (Own translation of Besunsan, 2006)

However, despite the evident improvement over the years, the Brazilian documents are still poorly adopted as a protected area's main management tool (Simas-Pereira, 2009). The report on Management Effectiveness of Brazilian Federal Protected Areas: Results of 2010 (ICMBio, 2011) verified there was small advance on management planning indicators, specially with regard to the existence of adequate management plans. And even though there are no official data or reference accounting the implementation of management plans, it is empirically known that very few are being implemented.

According to Dourojeanni (2003), management plans are necessary but they must be applicable, the quality is more important than the number or it makes no sense for nature conservation, for that he highlights Brazilian plans are very diverse in quality but very few are useful, in general they are product of expensive process but turn into papers of little implementation.

Regarding the Ecosystem Management principles, Brazil is still taking its first steps. Efforts are identified in water resource management, species conservation and conservation of territories such as Biosphere Reserves, ecological corridors and protected areas mosaics (MMA, 2011).

2.4 Pre-assumptions and research questions

This study starts from the principle the management plan is the main tool for protected areas administration and its implementation is the best way to reach these sites conservation goals; but still its use is a worldwide issue despite the effort, time and money invested on planning processes; and the existence of best practice guidelines is insufficient to overcome the matter while there is no identification and better understanding on the obstacles by the professionals involved on these documents preparation and execution.

As a mean of guiding the research, two questions were elaborated:

1. What are the worldwide cruxes for implementing management plans?

As an answer it was expected to list and comprehend the implementation cruxes in the broadest possible aspect, the international level.

2. Currently, which cruxes exert greater influence on the poor implementation of Brazilian National Parks' management plans?

As an answer it was expected to picture the current situation on management planning implementation for Brazilian National Parks, identifying its main cruxes among all.

The expected result is to provide information that can be use locally by protected area managers and planners in general in order to improve management planning implementation by identifying problems thus avoid or overcome specific mistakes according to each particular case.

3 METHODS

This research consists of 2 parts, each of them aiming to answer one research question. For the first query a complementing literature review was done and for the second one, quantitative interviews were applied to National Parks managers in Brazil. The research design is represented by the figure 2, which outlines in an illustrated way how the investigation took place, and by the presentation of the methods that were applied to each part of the survey, described in turn, detailing how data was collected and organized, and what tools were employed and how. A reflexion on the writing process, mentioning and discussing major practical problems, is also presented within the methods description.

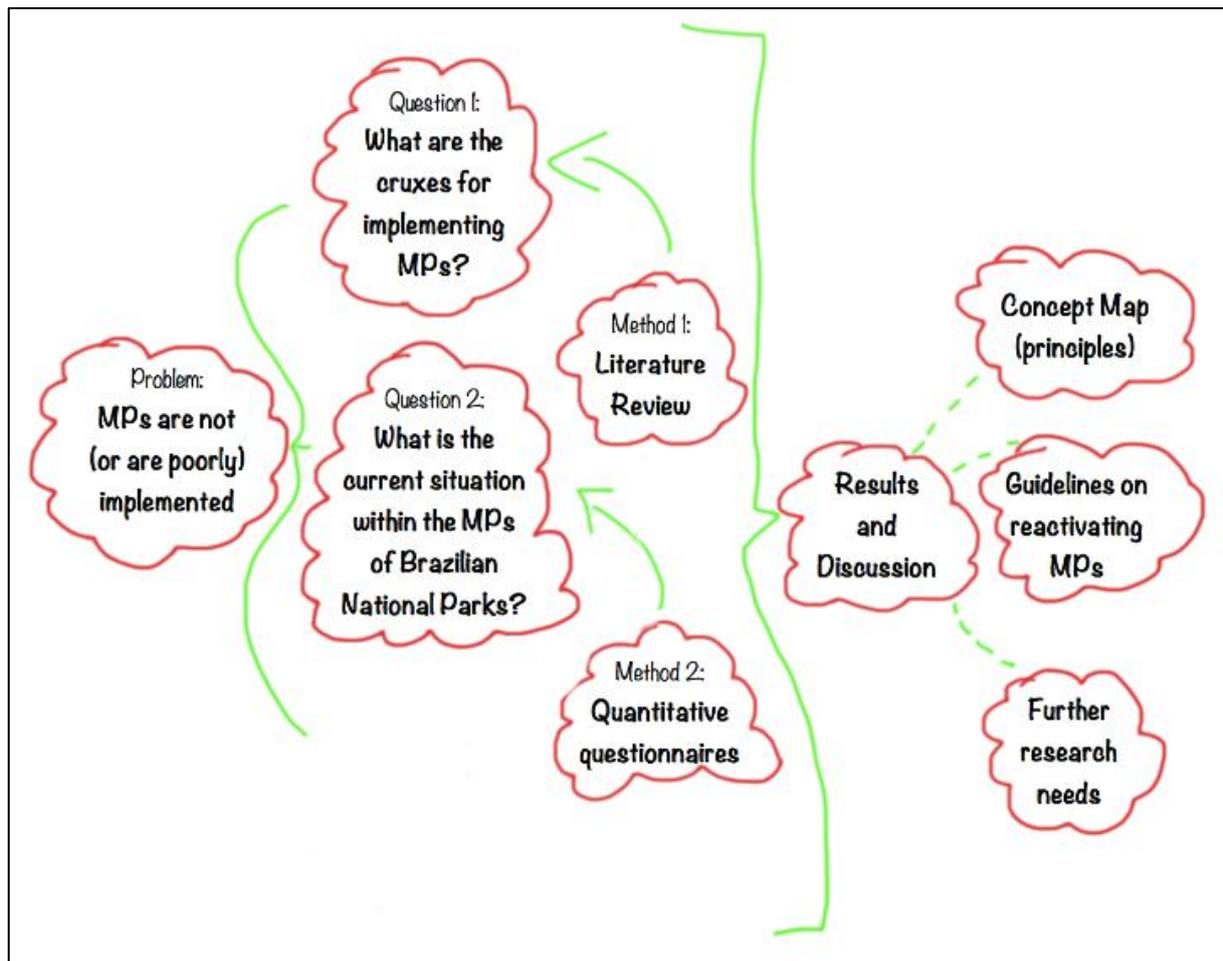


Fig. 2: Research design

3.1 Literature review

The literature review was limited to specific references whose topics were, at least in part, addressing the discussion on management plans implementation. It was though this restrict choice would filter the information in order to not mistake management planning implementation by protected areas

implementation in general. The implementation of management plans leads to protected areas implementation but the research goal is to understand specifically the problems in developing and implementing the practical tool.

However, this option was not an optimal solution, as there is not enough written that is focused on this subject, the discussion is too general and repetitive as well as the recommendations on how to assign the problems, which lack in details and directed alternative solutions.

From the consulted literature 16 documents were selected for being analysed. This material could cover the international view on the issue and also particular countries contexts such as Honduras, Costa Rica and the United States, these latter two are well know by great efforts in protected areas management. Lastly, 7 of these 16 documents are Brazilian publications.

After intensively reading, the content of these materials was scanned in order to collect the implementation cruxes, which were listed and clustered according to observed similarities and connexions. For reading, organizing and clustering the information, the web-based application "dedoose"⁷ was used. The brought up cruxes are then presented and discussed within the results.

3.2 Quantitative interviews

The quantitative interview was chose as a method as it is oriented to standardized answers from targeted data, to look at patterns and do comparisons. Also there was the will to introduce variables that were being absorbed from the read literature during the research instead counting only on the knowledge and understanding of the manager, considering that the two-way conversation with the focus group was impracticable at the moment the research was held.

The form was developed in order to look at the local context but also ought to express the managers' point of view and bottom up proposals. For that, a structured interview was elaborated and applied as a self-administered questionnaire via "Google drive" to all the staff of Brazilian National Parks - protected areas under governance of ICMBio - possessing an elaborated management plan.

The State and Municipal protected areas were not considered for study case due even bigger lack of literature on their management comparing to Federal areas and within these last, from the categories established by the SNUC, National Park is the most representative (MMA, 2013). It was also taken into account the choice of this category as case study would provide feedback from managers working in all but one of the Brazilian biomes and in turn, information richness would be brought up from the specificities related to each of these major habitat sites.

⁷Cross-platform application for analyzing qualitative and mixed methods research and can be found at <http://www.dedoose.com>

N.	National Park	Year	Biome
1	Amazônia	1978	Amazônia (Amazon rain forest)
2	Campos Amazônicos	2011	
3	Jaú	1997	
4	Juruena	2011	
5	Montanhas Do Tumucumaque	2010	
6	Monte Roraima	2000	
7	Pacaás Novos	1984	
8	Serra da Cutia	2008	
9	Serra do Divisor	2002	
10	Chapada Diamantina	2009	Caatinga (Xeric shrubland)
11	Serra Das Confusões	2004	
12	Sete Cidades	1978	
13	Ubajara	2002	
14	Araguaia	1981	Cerrado (Tropical savannah)
15	Brasília	1979	
16	Cavernas do Peruaçu	2005	
17	Chapada Dos Guimarães	2009	
18	Chapada Dos Veadeiros	1998	
19	Emas	2005	
20	Grande Sertão Veredas	2003	
21	Serra da Bodoquena	2013	
22	Serra Da Canastra	1981	
23	Serra Do Cipó	2009	
24	Cabo Orange	2011	Marinho (Marine)
25	Jericoacoara	2002	
26	Lagoa Do Peixe	2004	
27	Lençóis Maranhenses	2003	
28	Marinho De Fernando De Noronha	1990	
29	Marinho Dos Abrolhos	1991	
30	Restinga De Jurubatiba	2008	
31	Aparados Da Serra/Serra Geral	2004	Mata Atlântica (Atlantic rain forest)
32	Araucárias	2010	
33	Caparaó	1981	
34	Iguaçu	1981	
35	Ilha Grande	2008	
36	Itatiaia	1982	
37	Monte Pascoal	1979	
38	Serra Da Bocaina	2002	
39	Serra Do Itajaí	2009	
40	Serra Dos Órgãos	1939	
41	Tijuca	1981	
42	Pantanal Matogrossense	2004	Pantanal (Flooded savannah)

Tab. 1: Brazilian National Parks with management plan, year of its publication and related biome

From the 138 protected areas owing a management plan, 43 are national parks; 2 of them happen to have contiguous area and are sharing its management and planning, totalizing 42 documents; 8 were based on the former guidelines, 6 were based on both guidelines during the transition from one to another; and 21 were produced following the newest guidelines (ICMBio, 2013).

The contact to these protected areas staff via e-mail and "Skype" calls explaining the research and requesting contribution was the previous step to the forms application and in this way 29 parks and 133 employees could be effectively contacted, from which 26 parks and 42 employees had supported the survey answering to that.

The structure of the questionnaire shows a logical presentation of the topic, starting with general knowledge on the management planning processes coming to questions that lead to specificities of each protected area and to those related to the managers' opinion. The main cruxes previously identified in the literature research were addressed within the document, which can be found on Appendix I; the elaboration of the form followed the recommendations of Newing (2011).

By the moment the form was being generated it was understood if the literature review was done as a first stage of the research and not in parallel to the questionnaire elaboration these documents would have additional content and could have different arrangement.

During the process of analysing the answers to the questionnaire it was identified a qualitative interview could provide a better result when it comes to extract information from a focus group like the approached one as it provides through discussion an in-depth analyses on individuals' point of view. Yet regarding to managers' answers, a bigger number of participant, staff or parks, would bring more authentic conclusion.

4 WHY ARE THE MANAGEMENT PLANS "SITTING ON THE SHELF"?

There are several reasons that keep a management plan untouched after paying so much effort, time and money on its elaboration process. The current survey accounted 158 implementation cruxes within its literature review, which vary according the protected area's specificities, its country context and author's opinion, but most of them were recognized as worldwide-shared issues.

The implementation cruxes assemble a set of interrelated causes and the experts use to group them according to their views. For instance, Thomas and Middleton (2003) suggest the problems are of two kinds: those faced while preparing the document and those faced when implementing it; and the latter issues might be a consequence of the failure on the first stage of the process. Alexander (2013: 4) sort them in two other main categories "the weaknesses or failures of some planning systems" and "an inappropriate approach or attitude to planning".

In a more in-depth analyses about planning paradigms, Kohl (2002: 12) assigns most of the implementation barriers arise from the planning model so called "comprehensive rational planning (PCR)" that considers the world as "predictable, linear, understandable and stable (PLUS)", what is, at least, controversial when dealing with nature conservation. In this author's opinion mistakes will be repeated until there is a paradigm change for a "dynamic, impossible to fully understand, complex and always evolving (DICE)" world (own translation).

For this study the principles used by the authors cited above were adopted but diluted within the approached clustering. The terms "direct causes" and "indirect causes" were chosen for grouping the cruxes seeking a simpler organization and, consequently, better understanding of the results. The here called "direct causes" are the management plan's weaknesses and the probable answers to the question "why is the management plan unused or poorly used?" while the "indirect causes" are the threats or factors that induce to these weaknesses and thus the likely reply to the initial responses. As example, a lack of resources is a "direct cause" for not implementing a plan while the agency financial instability could be its "indirect cause".

"DIRECT CAUSES"	Document applicability
	Inadequate objectives
	Inadequate vision
	Inappropriate zoning
	Lack of specific information
	Standardized proposals
	Lack of financial plan
	Lack of outcome details
	Recommendations rather than decisions
	Unbalanced focus
	Inflexible
	Out of date
	Unrealistic
	Document design
	Excessive information
	Too general information
	Lack of link between description and proposals
	Inappropriate wording
	External demands
	Resources availability
Staff interest	
Lack of staff motivation	
Prejudice against MP	
Lack of staff ownership sense	
Lack of staff commitment	

Tab. 2: *Cruxes defined as "direct causes"*

The number of sub-groups and cruxes does not seem countable as they vary according to each protected area specificities and can be arranged (since respected similarities) according to each ones taste. What is exemplified in the following are these research findings, which has considered an international context and all that is cited in the consulted literature, but it is thought the cruxes possibilities can be infinite.

"INDIRECT CAUSES"	INSTITUTIONAL CHARACTERISTICS
	<i>Inappropriate attitude to planning</i>
	Lack of support
	Lack of planning praxis
	Inadequate priority
	Lack of implementation control and evaluation
	<i>Organization dynamic</i>
	Lack of specific policies
	Bureaucracy
	Inadequate internal relationship
	Financial instability
	Inefficiency
	Lack of publicity
	Management discontinuity
	Top down approach
	PLANNING APPROACH
	<i>Inappropriate guidelines</i>
	Inadequate guidelines use
	<i>Inadequate methodology</i>
	Lack of pre-planning
	Inadequate "terms of reference"
	Consultancy company hiring
	Inadequate participation approach
	Inadequate communication
	Inadequate responsibilities sharing among stakeholders
	Inappropriate inventory method
	Ignore PA constraints and opportunities
	Lack of adaptive approach
	Lack of focus on PA specificities
	Inappropriate staff involvement
Ignore mosaics and corridors	
<i>Inefficient monitoring</i>	
CAPABILITY	

Tab. 3: *Cruxes defined as "indirect causes"*

4.1 Direct causes

When facing a document, which should be a tool for facilitating the management, it is hoped it will bring solutions or at least directions to the protected area's administration. However, many plans do not fulfil these expectations and because of the dissociation from the area needs, their implementation may turn into one a problem for the managers.

The "direct causes" here presented and discussed were sorted in five main groups as already displayed in table 2 and their subdivisions are shown as a dichotomous key in figure 3 by the end of the sub-chapter as its overview.

Staff Interest

First of all, it is important to emphasize, it is believed there is kind of a myth over the management plan use by protected area's staff, as many managers have not read the plan or have read it partially and claim it is not amenable to implementation, making no use or limited use of it. In general the plan is blamed in its totality even if part of it is workable (Milano, 1997; Milano, 2000; Zeller, 2008; Mello, 2008).

Sometimes there is no responsibility charge from a higher level to the quality of the administration of the protected areas, thus leading to a lack of commitment by some staff (Milano, 1997; Milano, 2000; Dourojeanni, 2003; Mello, 2008). In answer to that Robles *et al.*, 2007 assigns "the lack of implementation is then rewarded" (own translation).

The elaborated document is often seen (or pretended to be seen) as an accomplished task rather than a process by the protected area's personnel (Alexander, 2013; Kohl, 2002; Milano, 1997; Milano, 2000) and the management is led by the manager mind, according to its experience and willingness; external demands or planned budget; and about this last, Vasconcelos and Cases (2009) noticed it is normally not matching with the proposed actions within the management plans.

According to Alexander (2013: 7) "the plan makes no contribution except to support the illusion that something must have improved: wildlife has been saved" and Almeida (2004) call them "paper plans" as they fulfil the legal formalities but are impracticable for day-to-day management.

Besides that it is recognized a general lack of interest in planning implementation, it may be because the employee is accommodated to its ordinary tasks without directives and much improvisation (Zeller, 2008; Robles *et al.* 2007), or there is a lack of ownership sense by the management team if the plan had been imposed to them (Alexander, 2013; Thomas and Middleton, 2003; Robles *et al.* 2007); and also because of the absence of personal motivation driven by unsatisfactory working conditions, insecurity due missing skills (Lane, 2003; Zeller, 2008; Mello, 2008; Robles *et al.* 2007) or even a prejudice against management plans owing to previous experiences, bad impression at a first glance to the document (Alexander, 2013), or disbelieved colleagues influence (Milano, 1997; Milano 2000; Mello, 2008).

Robles *et al.* (2007) recognizes in Costa Rica protected area's staff face a strong lack of motivation caused by "low income and little incentive [...] possibility of professional development is limited, as well as access to training and educational courses" (own translation).

Alexander (2013) believes that a previous contact with unsuccessful management plans' processes experienced by many managers had generated a collective distaste for planning and that a plan would probably be set aside if part of it is seen as irrelevant. In Brazil, the first elaborated documents were not feasible thus became an example of what should not be a management plan and

turned these tools in “villains” for the site managers (Milano, 1997; Milano, 2000).

External Demands

About the external demands, in high frequency they can deviate the staff attention from the plan execution and they can be related to: top-down approach, when the central administration impose special interests to the protected areas ignoring its directives; and emergency issues, these specially connected to enforcement activities and the lack of State presence in general, often charging the managers with matters out of their duties (Mello, 2008; Zeller, 2008; Robles *et al.*, 2007; Lachapelle *et al.*, 2003).

Document Design

In the other hand, when there is the will for implementing the plan, obstacles can be found as well. Starting with the document presentation like its structure and content (Thomas and Middleton, 2003). Many plans are accused to have a very unfriendly style, which can be from the volume (too long) to the language (too complex), but even worse, no clear link between descriptions and the planning itself (Zeller, 2008), making it impossible to identify the reasons for the management decisions within the plan (Thomas and Middleton, 2003). Krumpel (2000) has classified as a document failure the impossibility of follow through it and, likewise, do not execute its foreseen actions.

Zeller (2008) highlights that Brazilian plans have excessive wording mistakes and technical jargons among other problems, they are not clear for being understood by the document users. Added to that they are descriptive rather than prescriptive and their arrangement allows much data repetition. Mello (2008) believes the given room to protected area’s characteristics within the plans is too big.

The size of the document is normally increased by excessive and general information that are superfluous and needless for guiding the management, like in a scientific compendium and not in an operational tool (Zeller, 2008), turning the reading tedious, the consultation complicated and diverting the attention from the essential part of the plan, the planning itself (Thomas and Middleton, 2003).

Dourojeanni (2003) observed an imbalance when analyzing Brazilian management plans; from documents with hundreds of pages, 50% to 70% were only the description of the PA and its surroundings while the analyses and propositions were extremely short and full of gaps. The topics commonly covered in a much too broad way are the descriptions of biotic, abiotic (Dourojeanni, 2003; Zeller, 2008), cultural and historical factors (Zeller, 2008).

Besides that, in many Brazilian documents, important topics are approached in a regional scale which is often not compatible with the local reality, for instance,

for a protected area located in Amazon the use of the species list of the whole Biome (Dourojeanni, 2003). Regarding the socioeconomic factors, Zeller (2008) noticed a special discrepancy between the descriptions of the protected areas' surrounding issues and its addressed proposals.

Document Applicability

The partial or total useless management guidance is another barrier that might be met by those who try to implement a management plan (Lockwood, 2006; Alexander, 2013; Thomas and Middleton, 2003) and it is not daring to declare that it is one of the most important.

Many documents present no vision or an unproductive one and management objectives are often poorly elaborated and inconsistent: either too specific or too general; mixing up ends and means (Thomas and Middleton, 2003); can be too many or too less; or even contradictory (Zeller, 2008). Overall they don't support the further planning. For that Lachapelle *et al.* (2003) argue that too wide ideals don't lead to well elaborated management actions.

Krumpe (2000) states the use of issues as a guidance instead goals is one weakness found in management plans among the documents in the USA, together with the difficulty in elaborating long-term goals. Alexander (2013) points there is a lack in forecasting the desired achievements within the plans and that general objectives are of little value as they could be applied everywhere.

Unrealistic papers are very common, with an idealistic view rather than a real one. As well as out of date planning, standardized management programs, inappropriate zoning and unbalanced focus ignoring the protected area specificities. The last is emphasized by many authors who observed some important themes are ignored when not relevant ones are broadly covered, many times because of being more "appealing" topics, as tourism for example (Krumpe, 2000; Zeller, 2008).

However, this approach is far from contribute to protected area's conservation, as it diverts the attention from what is really substantial and eventually, can also lead to ecological damage; and all that added up to the inflexibility factor makes a document of little use by the managers (Thomas and Middleton, 2003).

According to Lockwood (2006) it was a general characteristic of plans in the mid 80s until the early 90s, to have less realistic prescriptions and more "wish lists"; and later, besides the more strategic approach applied to new documents, they were still lacking more detailed and specific outcomes for the protected areas' management.

Both aspects did not stay in the past, but remained as issues in the present time, as was observed by Thomas and Middleton (2003) plans are frequently deferring outcome details (blocking the management), lacking important information,

using recommendations rather than decisions (reducing the plan “power”) and missing a proper responsibilities allocation. Regarding the latter, Zeller (2008) adds that Brazilian papers presents long lists of stakeholders without proper analyses on their influence and roles for the protected area’s management leaving the doubt on whether shall them be contacted or not. Added to that, there is also a lack of good proposals for partnership establishment among contiguous protected areas, even if mosaics and corridors were already previously established.

From the management plans reviewed by Dourojeanni (2003), almost all come up with an ideal view of the protected area, mainly foreseen a desired long term situation even if it is not fitting its reality and peculiarities, like a visitor centre for not existent visitors. For Zeller (2008) there is an excessive amount of proposed infrastructure and equipments for the correspondent lack of funds for its establishment and maintenance. He also points out the planned personnel and proposals are completely out of the SNUC context; and even when alternative sources are forecast either there is a lack on details for their obtainment or they are not feasible to the protected area’s context.

Standardized management programs were also noticed in most of Brazilian documents, these are containing actions which seems to be copied from the guidelines and, of course, are lacking the specifications that allow the use by the protected area’s managers (Dourojeanni, 2003). Zeller (2008) strongly criticizes that, as the protected areas are mostly unique in their features, issues and needs, it is impossible to generalize actions that would fit all of them.

Regarding zoning, very complex examples are observed in Brazilian plans, some with more than 20 zones, impossible to be administrated characterizing a “detailed procedure which only produces beautiful documents, full of very colourful maps” (own translation of Dourojeanni, 2003). Zeller (2008) states the zones are too similar and confuse; and often have a descriptive feature rather than a prescriptive one. This author highlights as well it is difficult to differentiate regulations from conditions and activities and that are lacking connections between the zoning and the management programs. All that normally means an operational issue for the managers.

Thomas and Middleton (2003) highlight the specific lack of financial information in plans, concern shared by Dourojeanni (2003) who also noticed there is no information about the socioeconomic impact of the protected areas to its surroundings and only one management plan in Brazil addresses the protected area’s financial sustainability topic. This author and Zeller (2008) complain about the missing or deficient cartographic data as well and the georeferenced data bank which is sometimes delivered together with the plan and does not allow new information input and analyses (Zeller, 2008). In addition to that, the latter points out there are not enough highlights on the threats and illegal activities inside the protected areas.

Two issues that are common and very relevant in Brazil and were not cited by foreigners authors are: the land tenure regularization and the licensing for enterprises. There are few information on the topics within the management

plans, especially actual data and legislation, and they do not support the planning and far less the actions (Zeller, 2008).

Resources Availability

The lack of resources (personnel, funds and equipment) configures an obstacle for planning execution as well. For all Brazilian protected areas, considering the three different governmental levels (federal, state-owned and municipal), Freitas (2007) counted a deficit of more than 7000 employees. The situation is not different in Costa Rica (Robles *et al.*, 2007).

However, it can also be considered as mythic as management plan use as discussed previously. It is a widely shared statement among the authors surveyed the lack of resources is rather a problem of planning the ideal over the real (Thomas and Middleton, 2003; Dourojeanni, 2003; Milano, 1997; Milano, 2000; Zeller, 2008), an issue to be discussed next as an "indirect cause".

Why is the MP "sitting on the shelf"?



4.2 Indirect causes

As already explained, the "indirect causes" are considered here as the origin or basis to the issues nominated as "direct causes". They were divided in three main groups as previously shown on table 3 and these are in turn divided in sub-groups as displayed. The "capability" group was chosen as a separated group, unlike some other researches, because it is believed it is not always and completely dependent on the other factors and it is considered as important as the other two in influencing the "direct causes".

It was observed the "direct causes" can be generated by two (but likely by more) interrelated "indirect causes" making difficult their clustering without risking to produce a misinformation. Because the combinations are uncountable their definitive interconnections are not presented, but some possibilities according to what is explored within the literature.

Institutional Characteristics

The institutional context in which the protected areas operate can generate many obstacles for management plan implementation. However this is not a particularity of this field and the solutions are usually not in the hands of managers but higher political levels (Kohl, 2002). Added to that there is the well known and widespread disregard to protected areas management within the political agenda as highlighted, for instance, by Robles *et al.* (2007) for Costa Rica, where the low political priority given to protected areas results into little resources investment on their management.

Organization dynamics

The institutional financial instability is a problem for planning implementation (Thomas and Middleton, 2003) because even though a plan is considering the ordinary lack of investment in the protected area for its strategy, the situation can always get worse as there is normally no assurance on funds and its regularity, blocking some actions and interrupting others (Robles *et al.*, 2007). According to Zeller (2008), in Brazil, besides the small amount of governmental funds, many protected areas have it released randomly throughout the year and often with a short deadline to be spent (what is incompatible with the equal issue on lack of human resources); and these obstacles are also faced when dealing with alternative sources (Mello, 2008). The author points out this is a recurring situation over the years and any plan could be adjusted to that.

The institutional disorder and inefficiency are also issues (Robles *et al.*, 2007). The funds, for instance, are often misapplied under the excuse there are no resources for the planning implementation, however it can also be related to unrealistic planning or lack of interest on implementing proposals which do not require much investment (Dourojeanni, 2003). Regarding the latter, Zeller (2008) identified within Brazilian plans activities without money requirement, but initiative that were not executed.

A financial issue shared by Brazil and Costa Rica that causes a particular dissatisfaction by protected areas' managers is the application of funds generated with tourism. In both countries the resources go to the central administration and are redistributed within the institution, in the case of Costa Rica, for less visited protected areas, in Brazil 25% goes back to the resource-generating site. Even though the amount is not enough for covering the management implementation, this diminishes its execution possibilities (Zeller, 2008; Robles *et al.*, 2007).

The management discontinuity is a big obstacle for planning implementation, as perfectly stated by Alexander (2013) "conservation organizations can be even more dynamic than the habitats that they seek to protect". This issue is a consequence of personnel rotation, policies changeability, and inadequate relationship between employees.

The policies changeability or lack of specific regulations can lock the planning execution in case it is essential for developing its actions. Sometimes there are no policies to some important subjects within the conservation agencies, or outside, depending on other organizations, upper level resolutions or even legislation adjustment (Zeller, 2008).

The constantly exchange of employees, sometimes interrupting the planning execution, is a problem (Lane, 2003) but it also bad how it is handled. The information recording in protected areas is in general very poor, the knowledge, particularly those generated by practical experiences, tends to be lost as it is often shared only "mouth to mouth" (Mello, 2008). Added to that, the administration transition is frequently deficient, as the new individuals in charge may not take account of the former management (Alexander, 2013).

The fragility or lack of internal communication between different institutional levels during the planning process is an issue highlighted by Zeller (2008) and Robles *et al.* (2007). The latter believes it interferes on the future planning quality and in turn to its implementation. Instead, it is recognized a common top down approach within most organizations.

Political wills or central administration wishes are sometimes imposed to be included in the document during the planning process (Krumpe, 2000) or latter to be consider for implementation or not. The first counteract strategic principles resulting into an inadequate plan or even can be a threat to the site if is connected to external economic pressures; the second interfere in the document misuse even if it is applicable and relevant for the site management.

The lack of publicity of the documents is pointed out by Robles *et al.* (2007) as an implementation barrier because the awareness by stakeholders could support its control and attract commitment to it in some level. However, it is also identified a public apathy to planning, unless it is a conflict related to individual interest, most of people are not really concerned and willing to be involved on it (Lachapelle *et al.*, 2003). Dourojeanni (2003) criticizes the plans are sometimes

shared among actors of low interest while the own team and local population has no knowledge about it.

Bureaucracy

A centralized structure within the institution gives an inflexible aspect to implementation (Robles *et al.*, 2007). In Lachapelle *et al.* (2003: 483) it is state "planning by its very nature must be flexible", the author found out in his survey with USA planners that rigidity related to time, funds and staff blocks innovation and creativity and consequently paralyzes the management and the plan execution can collapse.

Milano (2000) also highlights for Brazil that some plans are owned in a way any change, even if indispensable, is allowed, which in turn is driven by the fact the management plans have a "challenging complexity" (own translation) as they are, at the same time, a regulation that requires procedural rituals and a program of actions that requires flexibility in the proposals evaluation and reconstruction.

Inappropriate attitude towards planning

It is claimed unanimously there is a general inappropriate attitude to planning by staff from all different administration levels that leads to little support by the central government and commitment by the sites' staff. Management plans and their implementations are not seen as a priority (Robles *et al.*, 2007), its elaboration is often led by the wrong reason and there is a common disrespect for written regulations. This happens particularly because this document is mostly not faced as a tool, but as a bureaucratic procedure (Rackham, 2006; Dourojeanni, 2003) where some of the involved planners do not even understand its purpose (Alexander, 2013); or worse, it is thought as compulsory process rather than a proactive exercise for improving management.

An example of institutional lack of priority is the missing integration between the planning (or strategies) of a higher level (system or central administration) and the protected areas, sometimes because the relevance of the management plans is not recognised (Alexander, 2013) or also because there is no upper level strategic planning (Robles *et al.*, 2007).

The neglect to planning is also evidenced by the lack of accountability on what is being implemented or not and why, caused either by missing mechanism (or difficulty in applying it) or priority (Kohl, 2002; Mello, 2008). This influences on the staff commitment and is equally bad when the monitoring is done but do not reflect on technical or financial feedback (Robles *et al.*, 2007). The lacks of monitoring and report systems are widespread issues.

In Brazil, the lack of support and monitoring to plans' implementation over the years has resulted in management without planning and oriented by emergency demands (Simas-Pereira, 2009). It is clear it is not an institutional priority; the

most common reason for starting a planning process is availability of alternative resources rather than site vulnerability or ecological relevance and it is never driven by the essentiality of planning itself (Mello, 2008; CEPAUC, 2012).

The lack of institutional support regarding management plans is experienced in many ways and all affect its implementation. First it is observed even though the plan was elaborated accounting the system's reality and is considered useful, it is perceived a lack of resources to its implementation. Furthermore, in Brazil it is also recognized a lack of integration between specific coordination within the central administration (e.g. Coordination of Territorial Conflicts Management) and the protected areas, for guidance in particular cruxes (Zeller, 2008).

Besides that, a lack of money, human resources (in number and technical quality) and training for the process (Thomas and Middleton, 2003), can result in a poor planning approach and consequently useless document. Also the lack of appropriate staff for conducting the process leads to consultancy hiring (Robles *et al.*, 2007) that besides being more expensive (Vasconcelos and Cases, 2009) can lead to inapplicable plans as discussed next.

Planning Approach

The planning approach is considered the main influencing factor to unsuccessful management plan's implementation. It can be full responsible for the issues related to document design and applicability as well as be connected to resources availability and staff interest.

Inappropriate guidelines

According to Robles *et al.* (2007) it is important to have a proper guidance regarding the planning model, which is not offered adequately, for instance, by the guidelines for protected areas in Costa Rica, it is too general and its use is not mandatory. In this case managers or consultants have total responsibility to decide the approach and the management plans are elaborated with different levels of quality and without a pattern that turn difficult their implementation.

Besides that, it leads to plans without monitoring and evaluation mechanism (Robles *et al.*, 2007). This problem is also encountered in the current Brazilian guidelines where the plan elaboration and approval is not bound to the existence of a monitoring chapter, despite it contains the monitoring strategy and its forms, it is recommended to be done in sequence to the document establishment and in the majority of protected areas this further step is ignored as well as the evaluation of the guidelines itself which periodically review is not foreseen by the central administration (Mello, 2008).

The Brazilian guidelines is alleged to lead to management plans having excessive diagnostic content which are useless for planning and management in general, but apparently, how to use the document seems to be a bigger problem than the document itself. Aside the lack of guidance on the structure of the elaboration

team and strategic planning features (mission, vision and strategic objectives) it is detailed, presents minimal requirements and orients to a continuous, flexible and participative planning. However it appears to be of complex use and is always followed "to the letter". It is believed its misuse is related to: lack of planners' skills, wrong attitude to planning (planning as a bureaucratic procedure) and inflexibility on the process requirements by the central administration (Mello, 2008; Zeller, 2008; Vasconcelos and Cases, 2009).

However, it is also highlighted: the criteria for zoning are mostly too descriptive or regarding public use; there is no guidance on how to consider issues like lack of funds or conflicts within the planning; and it is mandatory to cover all management aspects of a protected area even though in some case it is not necessary (Zeller, 2008; Mello 2008).

Some obligations may be considered meaningful for a particular situation and are done just because it is a rule and not because it is relevant and this also matches to the inadequate common view on planning as a final bureaucratic document. Lachapelle *et al.* (2003) exemplifies with public meetings approached in certain methods that are mandatory for USA national parks but actually only overwhelm the involved (including staff) while stakeholders are pretended to be part of the process.

Inadequate methodology

Starting with the pre-planning phase, it is considered an essential step to come out with a successful management plan. According to Thomas and Middleton (2003: 25) it is "critical to starting the planning process on the right footing" as at this moment the cornerstone decisions on the process are made: "what the process will achieve, how it will be carried out, timing considerations and who is to be involved".

However, not much attention is given to this step, it is often poorly executed or even skipped by planners. In Brazil there is no pre-planning in most processes, ignoring the protected areas' specificities and elaborating terms of reference for consultancy hiring as the projects first step. These documents are then prepared in generic and standardized way as they did not consider the available background information and management objectives of the corresponding sites, resulting in unfocused reports of little use for planning, apart from being more massive and expensive (Vasconcelos and Cases, 2009; CEAPUC, 2012).

Lockwood (2006) states that neglecting this kind of strategic considerations leads, for example, to extensive inventories. Alexander (2013) shares the same opinion but also points out it is not easy to be successful in defining what are the relevant and irrelevant data for a proper planning.

The management objectives should be set in this stage and even though they were previously established by law when designating the protected area, they can be reviewed, clarified and specified in order to guide the planning process

(Thomas and Middleton, 2003). Alexander (2013) asserts these objectives should be site-specific and clearly orient to desired management achievements.

However, poorly elaborated objectives are common and lead to an inappropriate planning effort, which in turn leads to inadequate management actions resulting in a plan of little use. Lachapelle *et al.* (2003) assigns it is rather difficult to set it properly, to find a clear idea, to make it specific and to make it mutually acceptable.

Limits of acceptable change (LACs) were introduced in protected area's management planning as an alternative to conflicting objectives and to add specificity to them (Thomas and Middleton, 2003). However, Kohl (2002) believes the current institutional indifference to management plans and the learning process generated by its use, gives LACs little chance of success.

The consultancy hiring for the process coordination and development without the management team involvement is highlighted and criticized by many authors. They specially argue this generates the lack of ownership on the document by the site managers, a disagreement on what is planned, ending up in the plan abandon or at least less willingness to implement it (Alexander, 2013; Thomas and Middleton, 2003; Robles *et al.*, 2007; Dourojeanni, 2003; Zeller, 2008).

Dourojeanni (2003) stress that management plans became an expensive product made without real interest on the site and the terms of reference for hiring consultancy do not guarantee the process quality as they are poorly elaborated. It also observed similar carelessness on writing the reports with complex wording; too technical, full of jargons what makes difficult the plan interpretation and use. The same author emphasizes the high prices are connected to inventories and that is contradictory to invest so much money on the elaboration of the plan and fail on its implementation because of lack of funds.

Another critical point is that the use of consultancy prevent the management team of learning by doing (Kohl, 2002) and excluding managers from the process means exclude their experience, which is essential for guiding a realistic planning. The consultants tend to work on their own view and methods that are often disconnected to the protected areas' focus (Robles *et al.*, 2007; Zeller, 2008).

Mistakes committed during the planning process can be fatal to the future document implementation. Using the example of Kohl (2002: 11), plans that are currently being generated "need a world where conditions do not change, where the future can be predicted and where the only limiting to implementation constraints are lack of money, time and people" (own translation).

Robles *et al.* (2007) states the inventories are good in general but the plans are of little use, as the decisions do not take account the best information available or management hypothesis. This is recognized as a general mismatch between surveyed information and final proposals (Thomas and Middleton, 2003; Dourojeanni, 2003). In general, the field work is not planning oriented as the

information gathering is not detailed accordingly to how it will be used afterwards. The usual is to realize an intense and standardized campaign in environmental diverse portions (rather than threatened or fragile ones) of the protected areas, far from the real needs, wasting time, money and the information itself (Zeller, 2008). Still on that, resolutions on zoning and management programs have often no justification and are conducted as standard procedures rather than a thinking process considering the protected areas' specificities (Dourojeanni, 2003).

Added to that, as the unfocused researches do not deliver proper answers for the managers, the practice is to recommend many further surveys to base most of the implementation proposals. However, they are often not amenable of execution, paralyzing the management (Zeller, 2008). According to the same author, in general, studies conducted in protected areas bring little benefits to its management. They are often incompatible to the site's needs as they are oriented by spontaneous demand rather than induced. And those, which are useful, sometimes are not processed to be included as a basis for the administration.

Regarding funds and staff, plans that do not consider the available resources or consider the current situation as the future situation tend to become useless or easily out of date (Lockwood, 2006). As observed by most authors there are many deficient planning regarding resources' needs as the ideal is planned over the real (Robles *et al.*, 2007; Thomas and Middleton, 2003; Zeller, 2008). They are not compatible with the management execution capacity and are sometimes too ambitious, creating much expectations (Robles *et al.*, 2007). Another point is the practice of planning without attending to the recommended gradual attribute for protected area's implementation (Thomas and Middleton, 2003).

Lockwood (2006) believes decisions within-agency without taking account the public opinion risk to turn into invalid proposals. It is pointed by Thomas and Middleton (2003) that negative perceptions by local communities, which are faced during the planning process, can interfere on planning and its implementation, but they can also be minimized by a proper communication and involvement in this same process. Lachapelle *et al.* (2003) also identified that inappropriate communication can deconstruct trust among staff and with the public and it is harmful for the plan and its future implementation.

Kohl (2002) emphasizes the importance of involving the stakeholders, establish an effective communication strategy, build a common purpose and strengthen trust among all (also within the protected area's team). He believes the exclusion of actors of interest from planning makes its execution impossible. This in reason of conflicts, which were not softened during the process, or lack of a proper commitment sharing for future planning implementation (Robles *et al.*, 2007).

Regarding the latter, an extra care is necessary on roles definition during the process and its implementation as well as each one's counterparts in order to not raise high expectations and establish a clear and tied up commitment. Vasconcelos and Cases (2009) argue there had been registered stakeholders'

participation in Brazil, but with acquiring data aspect rather than decision-making.

The appropriate stakeholders involvement is a controversial topic on which different beliefs are shared. Scholte (2000) in Getzner *et al.* (2010) for instance, states that to consider everyone's opinion and needs is to give a chance to unrealistic outcomes. All of that shows the big challenge for planners to decide about the adequate participation approach.

Monitoring and evaluation

It is believed monitoring and evaluation is the key to improve implementation issues. Without performance measures it is not possible to take account and charge responsibilities when necessary (Lockwood, 2006). Beyond that, this is the way to learn, correct and improve management to meet its objectives (Thomas and Middleton, 2003). Furthermore, missing that means the knowledge stays only on people's minds and errors tend to be repeated (Mello, 2008).

In Brazil, the management plans' implementation is not monitored and evaluated by the managers nor central administration (Simas-Pereira, 2009; Mello 2008), even though some plans contain monitoring proposals, they are unclear on how to interpret, analyse and reapply the information on management. Managers claim the data is useless and it is caused by the use of wrong strategy, targets and indicators, which express a degree (percentage) of implementation but not the quality of the management or impact on the protected area objectives' achievement (Zeller, 2008).

Furthermore, when reviewing a plan, is common to transcript the proposals to the new one, even if they are not feasible, ignoring its low quality, dealing with the new document as it is only a formality (Zeller, 2008). Vasconcelos and Cases (2009) complain about the lack on data registration and systematization of previous elaboration procedures as it affects the learning process by the management institution and successive mistakes repetition.

The adaptive management approach, better disseminated in business field, has been identified as a prospective structure in dealing with such complex task as natural resources management (Stankey *et al.*, 2005) and although it is currently largely recommended within the protected areas network as it can be found in many related publications, Kohl (2002) states it is still rather on the paper than in the field.

Capability

It is observed in Costa Rica that staff operating in the central administration has better educational level than those performing their duties in protected areas (Robles *et al.*, 2007). This is not the overall situation in Federal protected areas in Brazil as since 2002 the government has established the hiring of

Environmental Analysts⁸ on the basis of entrance examinations to form these sites' teams as well as the central administration civil service.

However, Milano (2000) points out in some Brazilian sites "there is a sufficient number of technicians [...] but the shortage of managers is evident" (own translation) and for the planning process, Dourojeanni (2003) highlights there are experts from all different fields but few are professionals in management of protected areas. Mello (2008) states the lack of skills (as well as out of date) and experience can generate an insecurity feeling by the managers for conducting a more simple but efficient process and points out that some staff uses the planning inapplicability as an excuse for hiding personal management limitations.

Regarding that it is possible motivation is more important than skills for starting a planning process and to implement it, considering the training is the experience itself (Mello, 2008). However if there is a high lack of skills within the teams in both stages, it can lead to poor planning, little implementation and demotivation, not necessarily in this order.

4.3 Actual situation in Brazilian National Parks

As previously presented within the methods, from the 42 national parks with management plan in Brazil, 27 (2 are sharing an integrated plan, totalizing 26 documents) are representing the following findings through the questionnaires answers of 42 of their employees. The table 4 brings the information on the management plan's guidelines of reference as well as the document validity of the approached protected areas.

Guidelines		Operation Period	
IBDF	5/26	Over 30 years	3/26
IBAMA/GTZ, 1996	3/26	Over 20 years	2/26
IBAMA/GTZ, 1996 and IBAMA, 2002	3/26	Over 10 years	5/26
IBAMA, 2002	15/26	Over 5 years	5/26
		Up to date	11/26

Tab. 4: *Number of management plans guided by each guideline and associated operation period*

It was identified 8 national parks did not follow the guidelines to the letter, using it for orientation not as a rule; 3 did a more flexible planning allowing adjustments according to local needs; 7 adapted the elaboration process to attend local needs and turn it amenable of execution; and 2 were innovating on the planning method, adapting or doing it differently from the "at the moment" recommended guidelines.

Implementation diagnosis

⁸Professional who works in organizational and strategic planning referring to the national environmental policies.

Starting from the implementation diagnosis, 23/26 management plans (88%) are being used as a supporting tool and there is an attempt on implementing it totally (17/42 answers) or partially (22/42 answers); 3/26 (12%) management plans are not being implemented, 2/42 answered it is not amenable for implementation and an alternative planning is used; 1/42 answered that any planning is used as a management guidance which in turn is driven by external demands. The overview on estimated implementation rate, done by the local managers for the 27 protected areas is presented on table 5.

Implementation Rate	Number of NP
0 to 30%	11
31 to 50%	11
51 to 70%	11
71 to 100%	9

Tab. 5: *Number of national parks and their estimated implementation rate*

This result can show there is an improvement on the use of this document over the last years as Mello (2008) has identified only 57% of Federal protected areas were using their management plans. This difference can be explained by the new institutional context after the establishment of the ICMBio in 2007, which brought a new structure focused specifically in protected areas and research centres and/or because 11/26 documents existed from 2008 on, are up to date, and were not considered by the previous survey.

Manager's point of view

Nevertheless, when asked about the role of the document for the site management, the respondents considered: 14/42 (33%), it is the national park main tool; 23/42 (55%), it is a supporting tool requiring adjustments; 3/42 (7%), it is a good source of information about the site; 2/42 (5%) it makes no difference to the management. These results meet Mello's (2008) findings, which registered the approached management plans were 40% adequate for management, 47% were partially adequate and 13% were inadequate.

It may demonstrate there was an improvement on the interest for implementing management plans and/or a change on the attitude towards planning, but the documents are still lacking attributes for making it appropriate for the national park's administration.

For that, the respondent had chosen from a list the factors that could interfere negatively on management plan's implementation and were observed on their national park's plan. The most chosen cruxes from the "direct factors" were the lack of resources (30/42), followed by high external demands (14/42), bureaucracy or political interference (13/42), extensive and descriptive document (10/42), bad work conditions (10/42) and planning incompatibility with management capacity (9/42). The other factors were selected 4 or fewer times and all of them are listed on table 6 together with 2 respondent comments.

"DIRECT CAUSES"		
Document Design	Extensive and descriptive document	10/42
Document Applicability	Poor elaborated objectives, mission and/or vision	1/42
	Planning is not compatible with conservation goals	0/42
	Planning is not focused on the management challenges	2/42
	Planning is not operational	4/42
	Planning is unrealistic	2/42
	Planning is inflexible	1/42
	Planning is not compatible with management capacity	9/42
	<i>"Out of date"</i>	
	<i>"It is missing a prioritization of the actions within the plan"</i>	
Resources Availability	Lack of resources	30/42
Staff Interest	Bad working conditions	10/42
Bureaucracy	Bureaucracy or political interference	13/42
Institutional Control	Lack of commitment by staff	1/42
External Demands	High external demands	14/42

Tab. 6: Direct causes affecting Brazilian national parks

The most chosen cruxes from the "indirect factors" were the lack of protocol for monitoring (16/42), followed by the inadequate measurement approach were the percentages do not reflect the achievements importance or its relation to the protected area's conservation objectives; the monitoring method is unpractical (8/42) and the indicators were poorly elaborated (8/42). All the "indirect causes" factors are displayed on table 7 along with some of the respondent comments on that.

These results show the current implementation of management plans in these national parks is apparently more influenced by institutional characteristics driven factors rather than the planning approach ones, besides the monitoring and evaluation aspect, which is, as expected, poorly developed among the Brazilian management plans. It is noticed in the comments there is some awareness about the inadequate attitude to planning by the central administration. However, regarding the high selected factor "lack of resources" it is believed it exists but it can be as well, as already discussed, a myth related to inappropriate planning approach.

"INDIRECT CAUSES"			
Planning Approach	Planning was not participatory	5/42	
	No/little engagement of management team on planning process	1/42	
	Lack of protocol for monitoring	16/42	
	The existent monitoring method is not practical	8/42	
	Variables are of dubious meaning	5/42	
	Indicators are poorly elaborated	8/42	
	The percentages do not reflect the achievements importance and/or relation to conservation goals	9/42	
Institutional Characteristics			
	Capability	Lack of skills/competence	4/42

Tab. 7: Indirect causes affecting Brazilian national parks

Manager's awareness and attitude

Continuing on the awareness of the target group, 7 sentences topic-related were given and the respondent answered if they were "aware", "partially aware" or "not aware" of them. The first 2 were SNUC articles; the 3rd was on the rate of protected areas holding a management plan; the 4th was about the guidelines existence; the 5th was on the guidelines content; the last two were on the implementation issue. The figure 4 shows, except for the quite known

information on the amount of existent management plans (number 3), the awareness decreases of as the affirmations become more topic-specific.

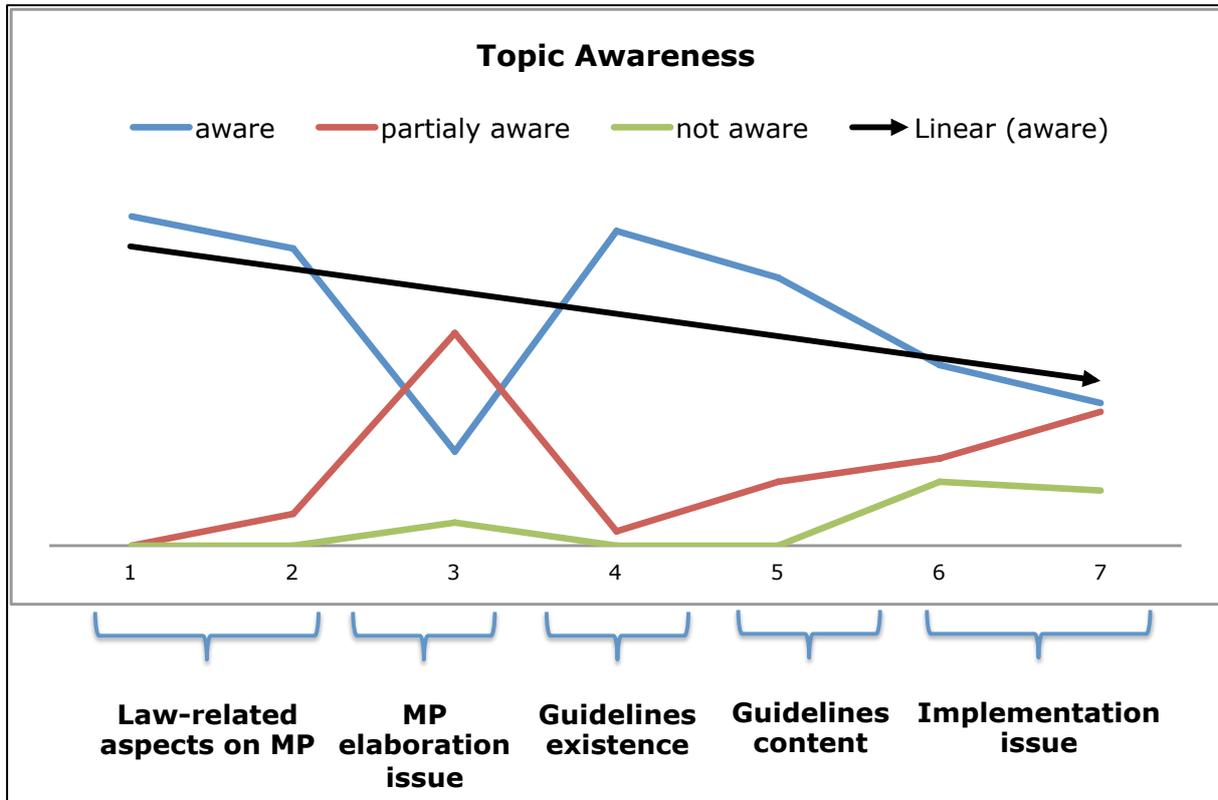


Fig. 4: Topic awareness by the protected areas' managers

As expected from Environmental Analysts, the law articles are well known; the inappropriate attitude towards planning can be exemplified by the existence of average spread knowledge on the number of management plans but little awareness on their quality. As already discussed, this document is generally faced as a bureaucratic procedure and in contrast to what would be a good practice, there is an overall concern in producing the plans rather than make it work effectively.

Yet on this same subject, when asked if a protected area could achieve its conservation objectives without a management plan, 16/42 respondents said "no" and 16/42 said "yes, since there is an alternative planning" and 10/42 said "yes, since there are enough financial and human resources available". So, 61% of the approached staff does not consider the management plan as an essential tool even though some of them believe planning is important.

This outcome has a range of different interpretations, but the answers can exemplify, mainly, the prejudice against management plans when planning is still considered important and the inappropriate attitude towards planning, more related to the lack of planning praxis and the lack of implementation control and evaluation for those who believes financial and human resources are enough "tools" for a protected area management.

Regarding the commitment/interest of the target group on their own management plan, it was asked if they have already read the document. For that, none of them alleged the document was not read; 6/42 said it was read partially when there was an specific demand; 9/42 skip totally or partially the contextualization and alleged being aware of zoning and planning; and 27/42 answered the document was read in its totality.

Ownership issue

About the planning ownership issue, it was analysed if there is a connection between the protected area's staff involvement on the planning process versus its document use (figure 5) and also between the individual participation on at least one stage of the planning process versus the individual perception on the respective management plan (figure 6).

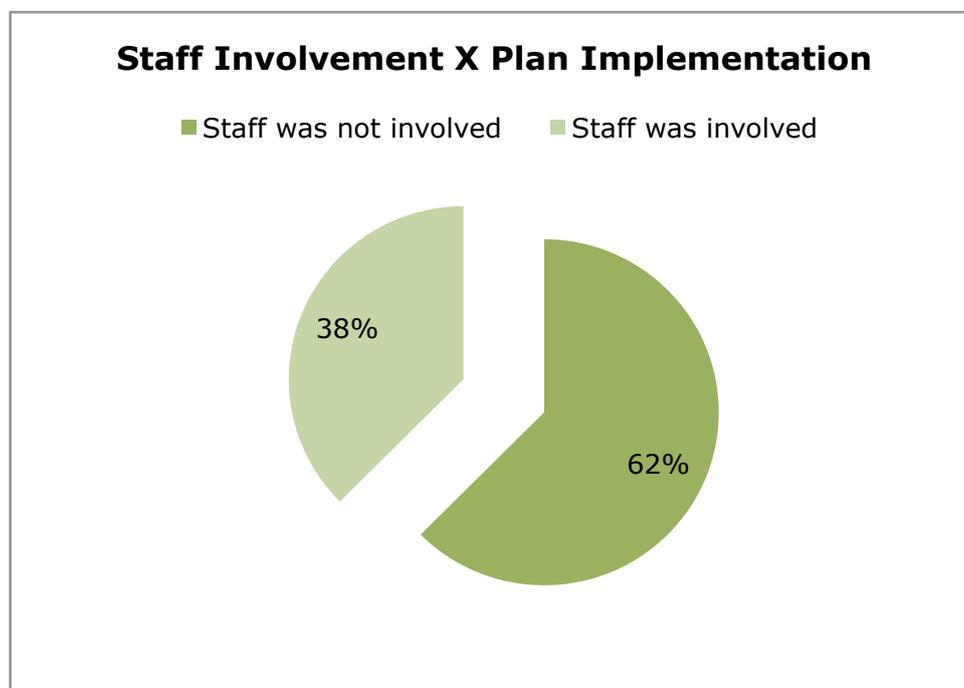


Fig. 5: Staff involvement on the planning process versus its document use

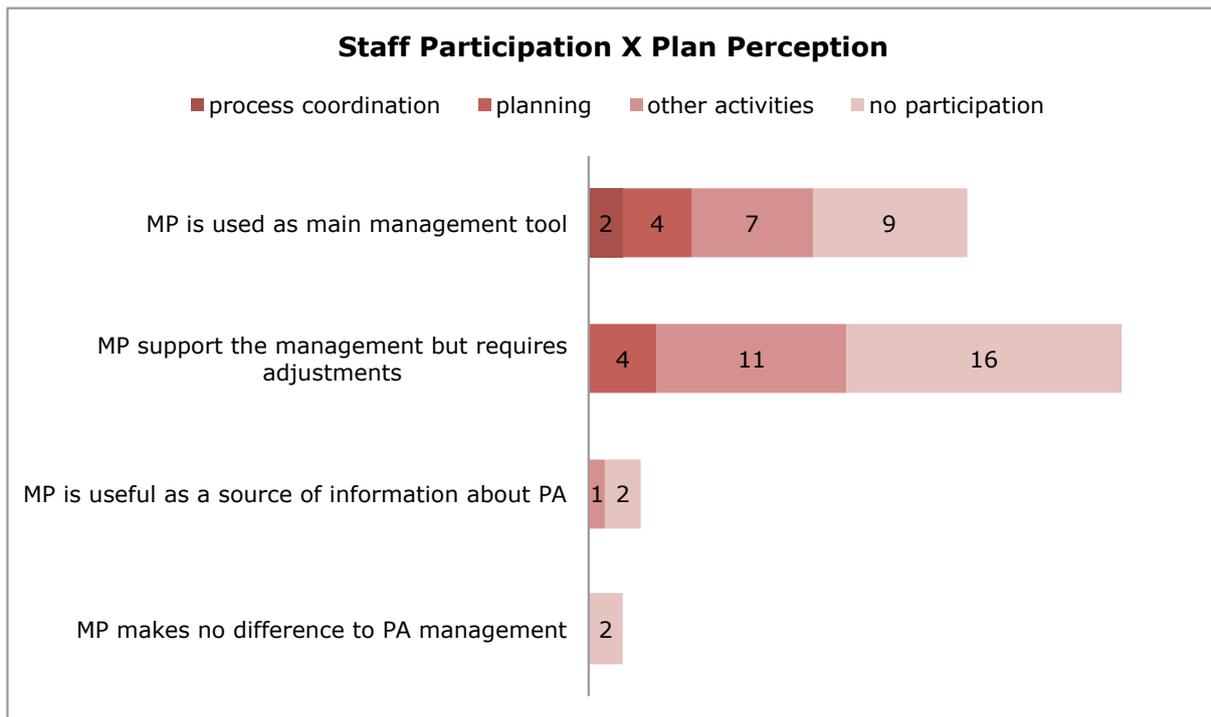


Fig. 6: Individual participation on at least one stage of the planning process versus the individual perception on the respective management plan

It is observed any of the comparisons evidence there is a lack of ownership sense regarding planning that can be related directly to the involvement in the process, in opposite to many of the consulted literature. On the figure 12 it is observed 62% of the plans being currently implemented did not have the actual staff involved on its elaboration, however, the documents that counted on actual staff contribution on its elaboration and are not being implemented totalize 38%.

On the figure 13 it is clearly evidenced that the perception on the local management planning is not closely related to the participation on the planning process. It shows a well-balanced opinion on the applicability of the management plans independently on the personal contribution did to that. For example, the 9 managers who did not took part on its protected areas planning consider it as main management tool and in turn believe the document is amenable of implementation.

It is assumed then, the staff involvement can be required as a strategy to produce a more applicable planning, considering the knowledge and experience the employees have from the are but it is also possible to be committed with a plan developed by others whenever it fits the protected area reality and needs, in other words, to overcome the "document applicability" barrier.

Besides that, a better approach to management discontinuity through the improvement of information registration and sharing, as well as the application of monitoring associated to control and evaluation by the central administration would help to avoid the referred crux.

Monitoring and evaluation

However, the survey brought the result that just 10 national parks do the management plan monitoring and evaluation, 13 do only monitoring and 19 do not monitor at all the implementation of this document. For those that are monitored: 1 protected area did it after 5 years of establishment of the management plan; 2 did it after 3 years; 1 did it after 2 years; 9 do the monitoring annually; 4 do it every semester; 1 does it every 3 months; and 4 do it according to the demand, without regularity.

The methods described for the monitoring are not standardized between the protected areas. Only 3 national parks were appointed as using implementation indicators and 3 managers cited the adaptive management as a principle adopted for monitoring and evaluation. It is evident the conducting of the plan evaluation according to its executed tasks, which is the main critic from the studied authors as it can provide a quantitative analyses on the implementation but can not measure if the protected area objectives are being achieved or not.

Manager's prioritization

The surveyed group was also asked for prioritizing, according to their entire experience and professional opinion, the elements that lead to a bigger impact on management plan's implementation and worth more attention and major effort investment (Figure 7).

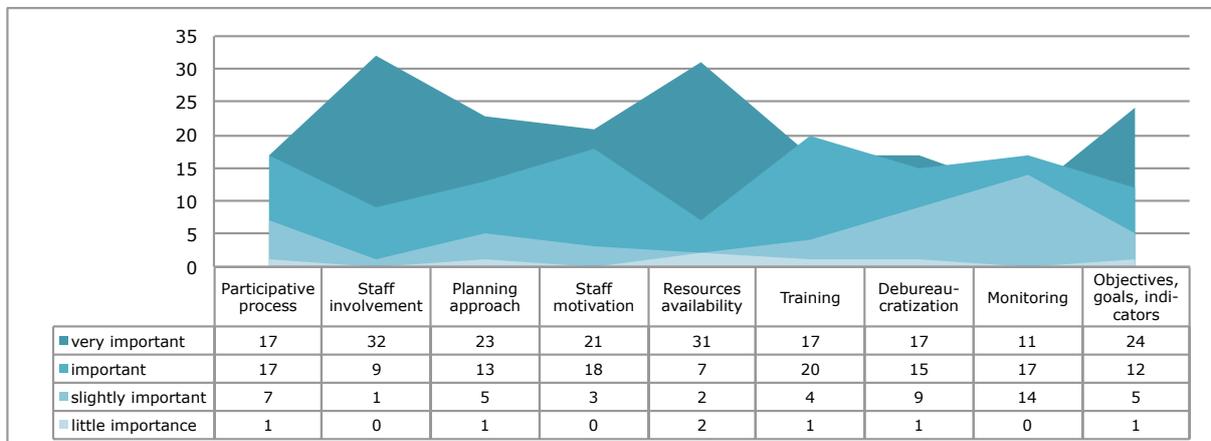


Fig. 7: Prioritization done by managers on the most impacting cruxes for the national parks

The results show staff involvement in the elaboration process is considered very important in most of the answers (32) followed by economic and human resources availability (31). The elaboration of appropriate objectives, goals and indicators for the management plans (24), the adequate approach to planning (23) and the staff motivation (21) are also highly cited cruxes that it is though should be focused in order to improve management plan implementation in Brazilian national parks, however, only monitoring (11) had a low rate as "very important" crux to be faced.

Comparing to the reviewed literature, staff involvement is also considered a priority as it can provide the "learning by doing" and more complete view on the protected area and its context, however it differs on the questionnaire findings itself when it comes to "ownership sense" as it is suggesting the involvement of current managers is not mandatory for the elaboration of a management plan amenable of implementation.

For economic and human resources availability, besides the crux existence, there are also the myths related to that as already discussed. Moreover, there is a consensus between authors and managers about the need of better approach to planning which redirects to more realistic and strategic documents considering the amount of money and employees at the protected area in short and long term. The existence of a business plan or financing tactics on the management plans is also pointed out in the literature as a crux that should be faced in order to improve the protected area's economic situation.

5 BRINGING THE PLANS FROM SHELF TO DESK

5.1 Overall recommendations

It was found there is no recipe to elaborate and implement management plans, however, it is believed the management of a protected area can follow key principles in order to facilitate the management plan elaboration, review and implementation with respect to reach the conservation goals assigned by its establishment. These overall principles are illustrated in figure 8 and described individually in sequence.

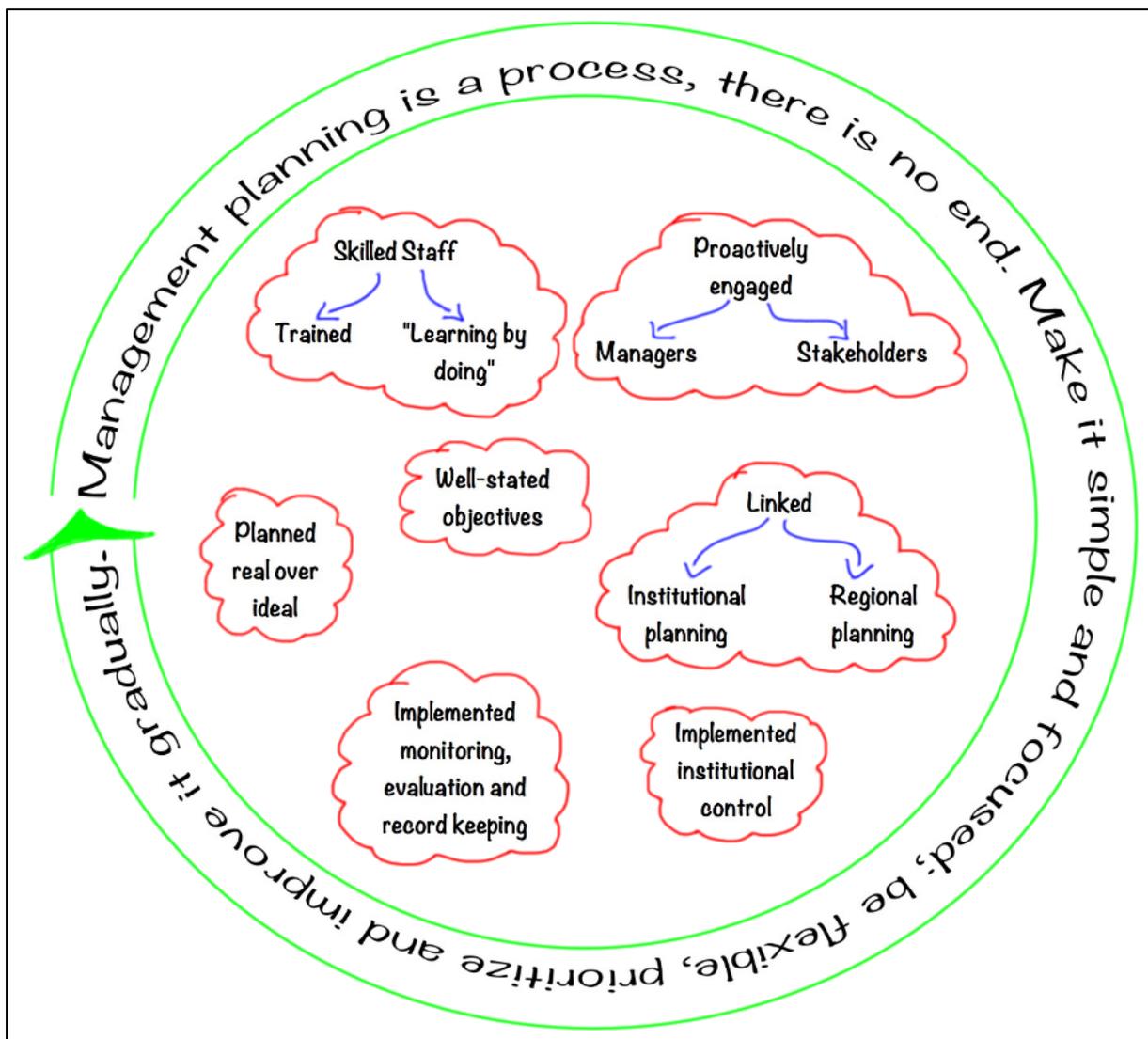


Fig. 8: Key principles to elaborate and review management plans

Skilled staff by training and learning by doing

It is believed the lack of capability can cause insecurity; bad decision-making and demotivation so it should be a priority for improving the planning process and

execution. Therefore an investment on capacitation is suggested as well as the interchange among protected areas and along with the central administration providing learning by doing, that despite the engagement at the management plan elaboration.

Proactively engaged managers and stakeholders

The participation of protected areas' current managers on their management plans elaboration is important since they have in general local experience, thus bringing the planning to a more realistic document within the area's context. The same happens for the integration along with stakeholders that can also provides the link with regional planning.

However, for implementing the plan the managers must be proactively engaged in order to overcome the lack of ownership sense when managing an area without having participated on its planning elaboration as it was found this previous involvement is not mandatory in order to implement a management plan.

Implemented institutional control

It is believed the engagement is met by individual willingness, satisfactory work conditions and efficient institutional control; and the last is a more feasible measure to be taken in order to assure the adaptive management is being execute, even better, it is possible to charge and reward the management quality. Also this strategy is the one that can be well developed in less time and to be spread easily, besides being economically and politically possible.

Linked institutional planning and regional planning

It is considered very important to link the protected area management plan to the institutional and regional planning in order to facilitate the communication between parts, overcome conflicts finding common goals and to avoid external demands, specially on economical and political basis.

Planned real over ideal

As presented before, unrealistic planning goes to the shelf. Ideal and standardized plans even combined with staff interest, are not amenable of implementation or, if combined with resources support the quality is not a warranty as the local reality is in general very specific on many places. Thus, when elaborating or reviewing it attention is required on the area's context, its characteristics and its funding and human resources possibilities, all followed by monitoring and evaluation, keeping the planning actual.

Implemented monitoring, evaluation and record keeping

It is understood a proper attitude towards planning means to invest, respect and use the plan and at least for respect and use it is believed the monitoring, evaluation and record keeping are essential steps as they promote (when efficiently presented and applied) the continuous adaptation of the plan and in turn, the protected area can achieve its conservation goal. However it is essential to be aware of the methods to be used and specially pay much attention to the indicators elaboration for them to be effective; and for that guidance is found in Alexander, 2013 and Thomas and Middleton, 2003 among other literature.

Well-stated objectives

Also essential and oriented by literature is the elaboration of well-stated objectives (or goals, depending on the adopted nomenclature). Many authors say they should be specific, measurable, attainable, realistic and timely - SMART. The objectives of a protected area are its planning basis, from them the actions will develop and for that it has to be carefully stated.

5.2 Identifying particular challenges

The "inappropriate attitude towards planning" is seen as a substantial barrier that strikes staff at local or central administration and is characterized by planning misuse or disbelief on its importance and power. Can rise from prejudice related to previous experiences in planning processes, lack of knowledge or merely negligence of assigned tasks. This, in turn, can generate the institutional lack of support, inadequate priority and lack of implementation control and evaluation.

This crux can interfere in most (if not all) other cruxes and training and control could be the keys to deal with this matter. The first is supposed to be fundamental on changing this picture and the last, if well performed, would certainly amend staff commitment. However, both are actions dependent on a top down approach as performed by bureaucratic institutions when the overall guidance leads to an adaptive organization as supported by Meffe *et al.*, 2002.

According to this author (Modified from R. Westrum, 1994) an adaptive organization seeks for information, stimulating training and expecting for new ideas; it shares responsibilities and rewards a good job, besides learning with failures and develop from that. Thus, taking it into account, a bottom up strategy is introduced expecting to rise up the interest on the issue and step forward to a situation closer to the ideal.

For that it is suggested the managers of the protected areas, stimulated or not by the central administration, do an analyses on their own documents and adapt them to proceed a "Minimal Adaptive Process" as described by Alexander, 2013, that comprehends monitoring and evaluation of the plan. And knowing the issues to be faced when elaborating a management plan, demanding, in general, big amount of time and resources; and considering the already published

documents, with contents that are probably valuable; the recommendations here presented are focused on improving the implementation of the existent plans.

This reviewing type proposal should not be misunderstood for the official reviewing process, although it can turn into one. It is meant to be used as a reflection on the document and from that to proceed with further amendments if necessary.

Therefore, it is thought to understand the management plan is the first move to implement it, followed by the prioritization of important information and feasible planning; the "learning by doing" has then started and can be supported by the specialized literature; the implementation associated with monitoring and evaluation restart the cycle that should be registered and shared within and outside the institution.

Among other advantages, the initiative can develop the managers' ownership sense by the plan, raise their interest on planning and provide capacity through "learning by doing" as done by individual initiatives found in D'Amico *et. al.* (2012) and Vasconcelos *et. al.* (2011). Furthermore, the outcome of accomplished tasks resultant of monitoring and evaluation can be a fuel for staff motivation.

The first instance of the review is to identify what are the cruxes that affect directly the operation of the management plan and the figure 3 presented a dichotomous key, which provides all the findings on direct causes for the implementation issue, sorted by categories. It can be used as a tool for guiding, either the local managers or central administration, on identifying the documents' main challenges and thus attack the source of the problems or indirect causes.

5.3 Further investigations

Some cruxes have no clear or contradictory solutions presented by the literature, as it is the case of the stakeholders' involvement strategy, which shows divergent opinion about the participation level on planning and implementation. For that, considering the doubt and the importance of stakeholders' involvement as presented before, it is suggested further and specific research should be developed on the topic.

Also the lack of better content and recommendations is an issue that faces the research approach topic, which investigates the protected area in order to support the management plan elaboration or review. This approach is closely related to expensive logistics, general and excessive data and poorly applied orientation by the management. Currently it is lacking further studies on how to collect information in an optimum way, harmonizing research and management actions without jeopardize the social and biological diversity of a protected area as well as to promote faster and cheaper planning processes.

6 CONCLUSION

It got clear the change on the attitude towards planning is required and that it deals with the whole implementation issue, however it is still uncertain how to consolidate this concept within the institutions, although it is considered there is not a bad offer on guidelines that present the best practices for management planning elaboration and implementation, they just seem to be poorly disseminated and applied.

It was also identified there are individual initiatives by random managers and experts, but as already discussed, staff interest and willingness should be associated with better work conditions, capacitation and resources investment, besides a proper monitoring, evaluation and record keeping.

Myths shared by some authors on planning process were identified as well, like the myth of lack of resources, when in some cases, the protected areas should have a more realistic plan, maybe containing a business plan, anything that would consider the investment possibilities and floatability for the protected area before planning; the myth of the ownership sense, unanimous among authors but discarded by the Brazilian managers when answering the questionnaires, showing the planning quality can overcome individual will; and the myth of the planning inapplicability, presented by few authors as a staff problem when they give up on implementation through the excuse the plan is not amenable for use instead assuming they did not read or understand the document or just are not willing to work on planning basis but self oriented or on external demands only.

It is understood the implementation cruxes are very diverse, some are dependent on others, some have more impact on the document use and some are applicable depending on the protected area's context. Because of that an analyses on each management plan situation is suggested for a more particular and appropriate outcome. It is relevant to deal with each document separately, to read it, to understand it and thus identify what are the main obstacles and prioritize them in order to focus the effort for handling efficiently the issue.

This research approach in sorting the implementation cruxes allows any management plan analysis in a first instance to sort out "what is wrong?" and at last "what is the source of these problems?" giving the document user a more clear picture of the issue to be faced for improving the documents. Besides that it is believed a bottom-up approach can be an alternative to be encouraged in parallel to an institutional control (top-down) instead only relying on this last.

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List of Figures

Fig. 1: <i>Number of Brazilian Federal protected areas with management plans over the years</i>	8
Fig. 2: <i>Research design</i>	12
Fig. 3: <i>Cruxes subdivision within the "direct causes"</i>	24
Fig. 4: <i>Topic awareness by the protected areas' managers</i>	37
Fig. 5: <i>Staff involvement on the planning process versus its document use</i>	38
Fig. 6: <i>Individual participation on at least one stage of the planning process versus the individual perception on the respective management plan</i>	39
Fig. 7: <i>Prioritization done by managers on the most impacting cruxes for the national parks</i>	40
Fig. 8: <i>Key principles to elaborate and review management plans</i>	42

List of Tables

Tab. 1: Brazilian National Parks with management plan, year of its publication and related biome.....	14
Tab. 2: <i>Cruxes defined as "direct causes"</i>	17
Tab. 3: <i>Cruxes defined as "indirect causes"</i>	18
Tab. 4: <i>Number of management plans guided by each guideline and associated operation period</i>	33
Tab. 5: <i>Number of national parks and their estimated implementation rate</i>	34
Tab. 6: <i>Direct causes affecting Brazilian national parks</i>	35
Tab. 7: <i>Direct causes affecting Brazilian national parks</i>	36

Appendix

Appendix 1: Translation of applied questionnaire to Brazilian national parks' managers

1. Protected Area

Select from the list below, the National Park where you are performing your duties currently.

Mark one only.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aparados Da Serra | <input type="checkbox"/> Iguaçu | <input type="checkbox"/> Pantanal |
| <input type="checkbox"/> Amazônia | <input type="checkbox"/> Ilha Grande | <input type="checkbox"/> Matogrossense |
| <input type="checkbox"/> Araguaia | <input type="checkbox"/> Itatiaia | <input type="checkbox"/> Restinga De Jurubatiba |
| <input type="checkbox"/> Araucárias | <input type="checkbox"/> Jaú | <input type="checkbox"/> Serra Da Bocaina |
| <input type="checkbox"/> Brasília | <input type="checkbox"/> Jericoacoara | <input type="checkbox"/> Serra da Bodoquena |
| <input type="checkbox"/> Cabo Orange | <input type="checkbox"/> Juruena | <input type="checkbox"/> Serra Da Canastra |
| <input type="checkbox"/> Campos Amazônicos | <input type="checkbox"/> Lagoa Do Peixe | <input type="checkbox"/> Serra da Cutia |
| <input type="checkbox"/> Cabo Orange | <input type="checkbox"/> Lençóis Maranhenses | <input type="checkbox"/> Serra Das Confusões |
| <input type="checkbox"/> Campos Amazônicos | <input type="checkbox"/> Marinho De Fernando | <input type="checkbox"/> Serra Do Cipó |
| <input type="checkbox"/> Caparaó | <input type="checkbox"/> De Noronha | <input type="checkbox"/> Serra do Divisor |
| <input type="checkbox"/> Cavernas do Peruaçu | <input type="checkbox"/> Marinho Dos Abrolhos | <input type="checkbox"/> Serra Do Itajaí |
| <input type="checkbox"/> Chapada Diamantina | <input type="checkbox"/> Montanhas Do | <input type="checkbox"/> Serra Dos Órgãos |
| <input type="checkbox"/> Chapada Dos | <input type="checkbox"/> Tumucumaque | <input type="checkbox"/> Serra Geral |
| <input type="checkbox"/> Guimarães | <input type="checkbox"/> Monte Pascoal | <input type="checkbox"/> Sete Cidades |
| <input type="checkbox"/> Chapada Dos Veadeiros | <input type="checkbox"/> Monte Roraima | <input type="checkbox"/> Tijuca |
| <input type="checkbox"/> Emas | <input type="checkbox"/> Pacaás Novos | <input type="checkbox"/> Ubajara |
| <input type="checkbox"/> Grande Sertão Veredas | | |

2. Does the National Park approached belongs to the National Program of Public Management and Debureaucratisation (GesPública) or another initiative that uses "GesPública" as base?

Example: "Program of Management for Results (PGR)", by Protected Areas of Amazon Program (ARPA).

Mark one only.

- Yes No

3. Mark according to your knowledge.

Mark 1 for aware, 2 for partially aware and 3 for not aware.

- "The management plan is a technical document by which, based on the general objectives of a protected area, establishes its zoning and standards that should govern the use of the area and its natural resource management, including the implementation of physical structures necessary for the management of the area."
- "The management plan of a protected area should be developed within five years from the date of its establishment."
- "The approved management plan should be available for public consultation at the protected area office and documentation center of the executing agency."
- "Approximately 40% of the Federal protected areas, 43 of these are National Parks, have prepared its management plan."
- "There is a methodological planning guideline published in 2002 for the elaboration of management plans for National Parks, Biological Reserves and Ecological Stations".
- "Monitoring the implementation of management plans is foreseen in the methodological planning guideline."
- "The management plans implementation of the Federal protected areas is not institutionally monitored."
- "Monitoring the implementation of management plans, in general, is not performed by the protected areas' management teams".

4. Do you think it is possible to lead the PA for meeting its conservation goals without a management plan?

Mark one only.

- Yes, since there is another planning document for guiding the PA management.
- Yes, since it is provided enough financial and human resources for the PA management.
- No, the existence of a management plan is required for achieving the PA conservation goals.

5. What do you think it is the function of the existing Management Plan at the approached PA?

Mark one only.

- Without the management plan, the PA operation is the same, nothing changes.
- The management plan is a great source of information on the PA, it is possible to use it for supporting projects and respond to search requests, for example.
- Surely the PA management is enhanced and facilitated by the management plan, but adjustments in the document are necessary.
- The management plan is the primary tool for the PA management and it is followed to the letter.

6. What was your involvement in the preparation of the management plan of the approached PA?

Check all that apply.

- No participation
- Planning Organization
- Survey of secondary information
- Field inventory
- Booklet development
- Strategic Planning
- Booklet review
- Other: _____

7. Have you read the approached PA management plan?

Mark one only.

- Yes, I read the entire document.
- Partly, I have not read the whole content, but I'm aware of the PA zoning and strategic planning.
- Mostly, I read only the necessary content according to specific PA demands.
- No, I have never read the document, I do not consider important for my role in the PA management currently.

8. Which methodological guideline was used in the elaboration of the Management Plan of the National Park approached?

Mark one only.

- Roteiro Metodológico de planejamento de Parques Nacionais, Reservas Biológicas e Estações Ecológicas. IBAMA, 2002. (Methodological Guideline for planning of National Parks, Biological Reserves and Ecological Stations).
- Roteiro Metodológico para o planejamento de Unidades de Conservação de uso indireto. IBAMA/GTZ, 1996. (Methodological Guideline for planning of Protected Areas of indirect use).
- Document prepared at IBDF time.

- I cannot answer.
 Other: _____

9. Concerning the use of the selected methodological guideline above, indicate whether one or more options listed below are reflected in the planning process of the approached National Park Management Plan elaboration:

Check all that apply.

- The suggested planning phases were not followed as it is indicated in the guideline, the process was adjusted according to the PA needs and/or its execution capacity.
 The planning method used was not as indicated in the guidelines or it was adapted to better meet the PA demands.
 A flexible planning was chosen, which allows adjustments according to the UC specifics.

10. Is the Management Plan of the approached National Park implemented?

Please note: it means the zoning and regulations proposed on the document are respected; the programmed actions on the document are executed (or there is the attempting to execute).

Mark one only.

- Yes, the Management Plan is used as a support tool for the management and there is an implementation effort for all the actions programmed in the document.
 Partly, the Management Plan is used as a support tool for the management, however there is no implementation effort for all the actions programmed in the document.
 No, but the National Park uses other(s) planning document(s) for supporting the PA management.
 After the last question in this section (6), skip to question 10.
 No, the National Park does not use the Management Plan neither other planning document as guidance to the management, which is driven by external demands presented to the PA.
 After the last question in this section (6), skip to question 10.

11. How would you quantify the Management Plan implementation in the approached National Park?

Answer with a number from 0 up to 100 (as percentage), based only on the Management Plan implementation even if the National park uses another planning document as guidance to the PA management.

_____.

12. Is the Management Plan implementation of the approached National Park monitored and/or evaluated?

Please note: it means regularly it is registered which of the programmed activities were performed or their execution percentage; the results are analyzed aiming the improvement of the management and/or planning strategy.

Mark one only.

- The implementation of the Management Plan is monitored and evaluated.
 The implementation of the Management Plan is monitored, but the results are not analyzed.
 The implementation of the Management Plan is not monitored nor evaluated. *Skip to question 10.*

13. How often the implementation of the Management Plan in the National Park approached is monitored and/or evaluated?

Mark one only.

- Monthly
- Quarterly
- Semi-annually
- Annually
- Other: _____.

14. How is the monitoring and/or evaluation of the Management Plan Implementation done in the approached National Park?

Describe briefly the methodology.

_____.

15. Below there is a list of factors related to the process of elaboration and content of management plans which may adversely affect its implementation; check those which can be identified in the approached PA management plan:

Check all that apply.

- The planning elaboration was not conducted in a participatory approach, involving the PA stakeholders.
- The PA management team was not involved or was minimally engaged in the elaboration of the management plan .
- The document is descriptive and extensive.
- The objectives, vision and mission of UC are unclear.
- The planning is not compatible with the PA conservation goals.
- The planning does not focus on the current challenges for the PA conservation.
- The planning is not operational .
- The planned actions are not realistic .
- The planning does not allow adjustments, it is bounded.
- The planning does not match the PA implementation capacity.
- Other: _____.

16. Below there is a list of factors unrelated to the process of preparation and content of management plans which may adversely affect its implementation; check those which can be identified in the approached PA:

Check all that apply.

- The managers are discouraged because of the working conditions.
- There are not enough human resources and/or financial resources for the PA management.
- There is not enough commitment by the PA management team.
- The actions are always blocked by bureaucracy or politics.
- There is a lack of training/competence for the planning implementation.
- There is a high external demand that diverts the focus of the PA management.
- Other: _____.

17. Still regarding to the factors mentioned in the last two questions, according to your opinion and experience, rank them in order of importance in impacting management plan implementation:

Please note: starting with 1 for most important.

- The planning elaboration was not conducted in a participatory approach, involving the PA stakeholders.
- The PA management team was not involved or was minimally engaged in the elaboration of the management plan .
- The document is descriptive and extensive.
- The objectives, vision and mission of UC are unclear.
- The planning is not compatible with the PA conservation goals.
- The planning does not focus on the current challenges for the PA conservation.
- The planning is not operational .
- The planned actions are not realistic .
- The planning does not allow adjustments, it is bounded.
- The planning does not match the PA implementation capacity.
- The managers are discouraged because of the working conditions.
- There are not enough human resources and/or financial resources for the PA management.
- There is not enough commitment by the PA management team.
- The actions are always blocked by bureaucracy or politics.
- There is a lack of training/competence for the planning implementation.
- There is a high external demand that diverts the focus of the PA management.

18. Below there is a list of factors that may negatively impact the implementation monitoring of management plans, check those which can be identified in the approached PA management plan:

Check all that apply.

- There is no methodology or protocol proposed for registration and evaluation of the implementation results.
- The proposed methodology is not practical or easy to apply.
- The variables have dubious meaning.
- The indicators are poorly designed.
- The percentages do not reflect the significance of the achievements and its effects in relation to the conservation goals.
- Other: _____.

19. Comments:

Write here if you have any comment related to the presented questions or there is a lack of space for some important information you want to share. Thanks for the input!

_____.