

PEOPLE, PARKS AND MONEY

Stakeholder involvement and regional
development: a manual for protected areas

Michael Getzner
Michael Jungmeier
Sigrun Lange



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STAKEHOLDER INVOLVEMENT AND REGIONAL DEVELOPMENT:
A MANUAL FOR PROTECTED AREAS

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With contributions by Roger Crofts,
Barbara Müller and Thomas Topp

Research assistance:
Anna Unterköfler
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A NATREG training manual for partners

This publication is financed by the NATREG project.
The NATREG project is financed by the South East Europe Transnational
Cooperation Programme
Published with support of the Research Council of the Alps-Adriatic-University
of Klagenfurt (Forschungsrat der Alpen-Adria-Universität Klagenfurt)

Series: Proceedings in the Management of Protected Areas, Vol. 2
Series editors: Michael Getzner, Michael Jungmeier

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Programme Managing Authority cannot be held responsible for any use which may be
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Title page:

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Klagenfurt, 2010

Druck: Druckerei Theiss GmbH, A-9431 St. Stefan

ISBN 978-3-7084-0413-4

To our kids

FOREWORD

Currently, there are a number of books on the market dealing with protected areas management from different perspectives. However, there is no book available that emphasises regional development and stakeholder involvement along the “life-cycle” of protected areas and that additionally has a focus on the European perspective of managing protected areas.

The current book tries to fill this gap by drawing on a broad base of research and consulting experience by the authors and their networks, especially the ones connected to the Klagenfurt University’s study programme “Management of Protected Areas”, and to preceding research projects such as IPAM (Integrated Protected Areas Management) and PANet (Protected Areas Networks). Furthermore, E.C.O. Institute of Ecology’s experience with planning and managing protected areas provided the link to practical decision-making and the bridge to practitioners and people working “in the field”. The study programme also draws on the broad experience of international lecturers.

Before this background, the authors explore the significance of stakeholder involvement and regional development in the manifold tasks and fields of activity in PA management, and illustrate, summarise and condense the main issues, instruments and tools dealing with regional development and stakeholder involvement.

The main authors of the current volume are Michael Getzner, Michael Jungmeier and Sigrun Lange. While the authors acknowledge the responsibility for all mistakes in the book, they are thankful for support by the lecturers of the above-mentioned study programme, by the staff at E.C.O. Institute of Ecology (Klagenfurt), and by many colleagues working in other organisations as well as in protected areas.

In addition, Sigrun Lange was not only co-author of the current volume but also designed most of the graphs and figures (see credits in the appendix). Roger Crofts wrote a sub-chapter on administration and organisation, and Barbara Müller drafted chapters on financing and business planning, and co-operation design. Thomas Topp co-authored the chapters on management effectiveness, idea and vision, mission statement and governance, and contributed to some of the sub-chapters.

Furthermore, Anna Unterköfler and Daniel Zollner provided research assistance on some of the sub-chapters.

The current volume is an outcome of an international EU-funded project within the framework of SEE (South-East Europe). The project's name is NATREG ("Managing natural assets and protected areas as sustainable regional development opportunities"; project code SEE/A/479/2.3/X) and is carried out with partners from Croatia, Italy, Serbia, Slovenia, and Austria. Within the project, the current book functions as a training manual for project partners in the respective protected areas. According to the aims and objectives of the project and the EU's funding programmes, the book also serves as a means to distribute the project's findings to the largest possible audience. We thank the European and national authorities who made the current research possible, and are grateful for the financial support that facilitated the current publication.

We would also like to thank all our partners in different countries for their inputs.

Thanks are also due to the managers of the NATREG project, Daniel Zollner (E.C.O. Institute of Ecology), Gregor Danev, Eva Stare, and Elisabeth Frei (Research Management Department, Klagenfurt University).

The printing of the current volume was also supported by Klagenfurt University's Research Council (Forschungsrat).

We hope that the current volume serves as a good basis for discussing the pressing issues in protected areas, and that the readers will be encouraged to dig further into the fields of protected areas management. The book is particularly dedicated to the protected area managers in South-Eastern Europe, to all stakeholders in the regions, and to our students and graduates of our international post-graduate M.Sc. programme on "Management of Protected Areas" at Klagenfurt University.

*M. Getzner
Project head, September 2010*

FOREWORD

While ruminating about this foreword and trying to find words to paint a picture of the project NATREG, three words occupied my mind: development, participation, benefits.

The NATREG project is dealing with the challenge how to manage and understand natural assets and protected areas as sustainable development opportunities. Details on the project partnership, the aims, actions and results, can be found in the appendix of the current volume. However, what does the central NATREG phrase, “Develop with nature”, actually mean?

Nature protection is widely considered an obstacle rather than an opportunity as natural assets are not sufficiently recognised as advantage and possibility for *development*. The big question is why this is the case! Answers can be found in analysing many decision making processes in protected areas with significant lack of stakeholder *participation*. Many best practice examples show that nature protection can be a good prerequisite for local and regional economic development such as in the Bavarian Forest national park. With effective and efficient management, sustainable development – economic, ecological and social – can be promoted for the *advantage* of the region and the whole economy.

The NATREG project is using the experience gained by its partners to summarise meanings of all three words in order to show that development with nature together with a high level of stakeholder participation leads to sustainable development opportunities and benefits for all cooperating parties.

G. Danev
NATREG project manager, September 2010

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1 INTRODUCTION, INTENTION AND STRUCTURE OF THE BOOK

1.1 Introduction: protected areas, regional development and stakeholder involvement

Protected areas essentially set aside land for the purpose of conserving biodiversity – i.e. the diversity of genes, species, ecosystems and landscapes. Additional to the aim of conservation, protected areas provide information and education, recreation, scientific research, and most often also have a significant impact on local and regional development. The importance of these aims, and the significance of regional development, depends, first of all, on the assigned category of the protected area. For instance, national parks have other aims and objectives than wilderness areas, protected landscapes or biosphere reserves.

However, benefit sharing is one of the most important concepts when it comes to the costs and benefits of establishing and managing a protected area. Regardless of the assigned category of the protected area, it is crucial to understand the impacts of protected areas on local and regional development in terms of ecological, social and economic dimensions.

In order to provide a fair distribution of costs and benefits, to maximise benefits for local communities and the region, and to strengthen the effectiveness and efficiency of conservation management, it is important to involve all groups of stakeholders in the processes of establishing, designating and managing protected areas.

Stakeholder involvement is therefore crucial not only for the acceptance of the protected area, but also for an effective and efficient implementation of park policies, and for benefit sharing between nature and local, regional, national and global communities.

The involvement of stakeholders in the process of establishing and managing can also be considered a fundamental change in governance structures. In the past, many protected areas were established by a legislative act by regional or national governments without any reference to modern management principles. This top-down approach is increasingly complemented by the development of protected areas as public projects in bottom-up processes. While it is still important to implement the respective legal and institutional frameworks, the public debate at the

local and regional level not only provides crucial information, but helps to make management more efficient and effective, both in terms of regional development as well as the fulfilment of ecological conservation goals.

1.2 Intention and problem setting

The current volume intends to highlight the significance and importance of stakeholder involvement over the life-cycle of protected areas, from the preparatory phase (development of the idea for and a vision for a new protected area) to the planning, establishment, designation and day-to-day management phase.

In each of the phases, different Fields of Activity (FoA) are in place which in turn include many different management tools and instruments. In all fields, stakeholders may be involved by information, consultation and participation in decision-making. The book therefore provides a discussion of each activity, but also of the involvement of stakeholders, of the benefits and costs of involvement, and the connection to regional development. Regarding the last, each activity in PA management may consider regional development.

The specific aims of the current book are therefore:

- Discussion of the different Fields of Activity (FoA) over the “life-cycle” of protected areas, and presentation of best-practice approaches in order to facilitate the use of the book also as a “manual” for practitioners;
- Analysis of the importance and operationalisation of stakeholder involvement in each of the working steps according to the FoAs; and
- Reference to the potentials on each FoA to support and accompany regional development opportunities and efforts by considering not only the ecological but also the social and economic impacts of management.

The current volume also serves as a training manual for local and regional PA managers and stakeholders, in particular working in the NATREG network and project with the aim to set up systems of integrated management of protected areas in Austria, Croatia, Italy, Serbia, and Slovenia.

1.3 Structure of the current volume

The book basically is structured according to the Fields of Activity (FoA) over the “life-cycle” of protected areas (PA). Chapter 2 provides a comprehensive overview of the categories, aims, objectives of protected areas, and discusses separately the basic issues and concepts of stakeholder involvement, regional development and governance principles in PA management.

Chapter 3 presents all FoA in PA management, and starts with the first steps in PA management (idea, designation), considers the basic and detailed planning activities, and then analyses the broad range of working packages, instruments and tools of day-to-day management in protected areas. In all sub-chapters, the issue of stakeholder involvement and regional development will be treated by linking the FoA to PA policies directed towards enhancing involvement and development.

Chapter 4 summarises the main contents of the current volume, concludes and finally highlights the most important recommendations for PA management.

2 PEOPLE, PARKS AND MONEY

2.1 Protected Areas: definition, categories and institutions

Protected Areas – special places for nature and people

Protected areas (PAs) are the fundamental basis of virtually all national and international biodiversity conservation strategies, supported by governments and international institutions such as IUCN (UN acknowledged “World Conservation Union”) as well as international treaties such as the Convention on Biological Diversity (CBD). Protected areas significantly contribute to the protection of the world’s threatened species and biological resources, provide important ecosystem services and are often key elements in climate change mitigation strategies. In some cases they even shelter threatened human communities or sites of great cultural and spiritual value (Dudley 2008). In addition, PAs often provide income and livelihood of people living close to these areas. It is therefore of crucial importance to consider PAs not only in a narrow “ecological” perspective but also to account for the social and economic dimension (sustainability).

Since the first national park was established in 1872 (Yellowstone National Park, USA), the number and size of protected areas has risen dramatically (Figure 1). Most notably, in the last 40 years, the global network has increased “from an area the size of the United Kingdom to an area the size of South America” (Dudley 2008, 2). Today, protected areas cover about twelve per cent of the land surface, making them one of the Earth’s significant land uses assigned by humans.

However, major challenges remain. The existing system of protected areas does not cover all biomes and species, requiring protection. In addition, protected areas are often not able to fulfil their biodiversity conservation objectives; with many of them not yet fully implemented or managed (CBD, 2009). As far as marine protected areas are concerned the situation is even worse: only 0.6 per cent of the ocean’s surface area and about 1.4 per cent of the coastal shelf areas are under specific protection (CBD, 2009).

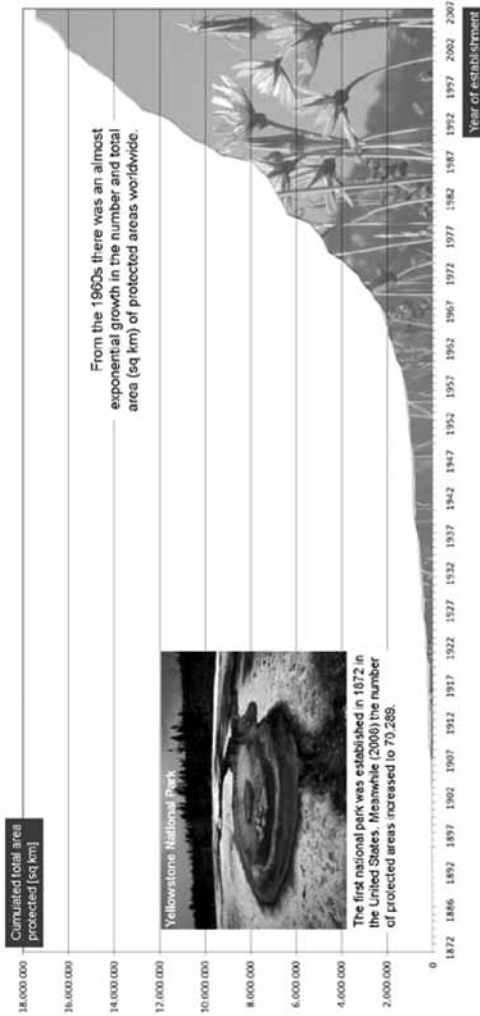


Figure 1: Growth in nationally designated protected areas from 1872 until 2007 (number and size in km²)

Source: WDPA, 2008; authors' draft.

Over the last four decades there has been a paradigm shift (Weixlbaumer and Mose, 2008; Weixlbaumer, 1998) in the role of protected areas from strictly protected reserves to a broader conceptual and practical approach, including sustainable use areas. Besides their conservation function, today's protected areas contribute to human welfare, poverty alleviation and sustainable development. The historic idea of protected areas has its roots in potential or actual conflicts between nature conservation and economic development. Many protected areas were established as a result of year-long conflicts between conservation and exploitation of natural resources such as electricity production (dams and hydro power stations), infrastructure projects (highways, pipelines, ski resorts) or projected mining activities. Nowadays, many PAs are established based on the pro-active idea of setting aside areas for a large diversity of functions including biodiversity conservation, recreation, education, science, and also regional development based on a sustainable use of natural resources. For instance, the European Union's Natura 2000 frameworks (Flora-Fauna-Habitat and Birds Directives) aims at establishing multi-functional Europe-wide networks of Protected Areas.

This implies that protected areas are by no means uniform entities. They have a wide range of (management) aims to achieve and are often governed by a set of rules and principles while including the involvement of a broad range different stakeholders. This is demonstrated by the fact that a site could be so fragile that nobody is allowed to walk through the ecosystem if nature conservation is the only single objective. Other protected areas may encompass cultural, even inhabited landscapes with a high degree of (partly man-made) biodiversity (Dudley, 2008). In such cases, extensive forms of human land use are explicitly required to maintain the open land with its special abundance of rare species, such as orchids, specific butterflies or birds.

Major frameworks and institutions

For more than 50 years, IUCN (World Conservation Union; see Box 1) has promoted and assisted the planning and management of protected areas and their integration into environmental and economic policies. IUCN has also strengthened the capacity and effectiveness of protected area managers through the provision of guidance, tools and information (IUCN, 2009). The organisation made a considerable effort to develop a categories system based on the principal management approaches for protected areas (see Figure 4) to create a common understanding, both within and between countries. In many discussions, it also agreed on a definition of what a protected area actually is. This definition was lately revised by IUCN members and first published by Dudley (2008). A protected area is "a clearly defined geographical space, recognised, dedicated and managed, through

legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”.

This definition condenses many concepts and thoughts into one short sentence. Figure 3 picks each word or phrase and explains the underlying meaning.



Figure 2: Protected Areas as wilderness sites or areas of extensive human use

Left: Virgin forest in Bavarian Forest National Park; right: Rhön Biosphere Reserve.

Based on the outcomes of the 5th IUCN World Parks Congress, in 2004, the Convention on Biological Diversity (CBD, see Box 2) agreed on an ambitious Programme of Work on Protected Areas (PoWPA). Protected areas are considered as “cornerstones of biodiversity conservation and critical to the achievement of the 2010 biodiversity target and the Millennium Development Goals” (CBD, 2009). According to the biodiversity target, at least ten per cent of each of the world’s ecological regions should be effectively conserved by 2010 (CBD, 2009). Therefore, the “establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas” shall be achieved (Decision VII/28) (CBD, 2009).

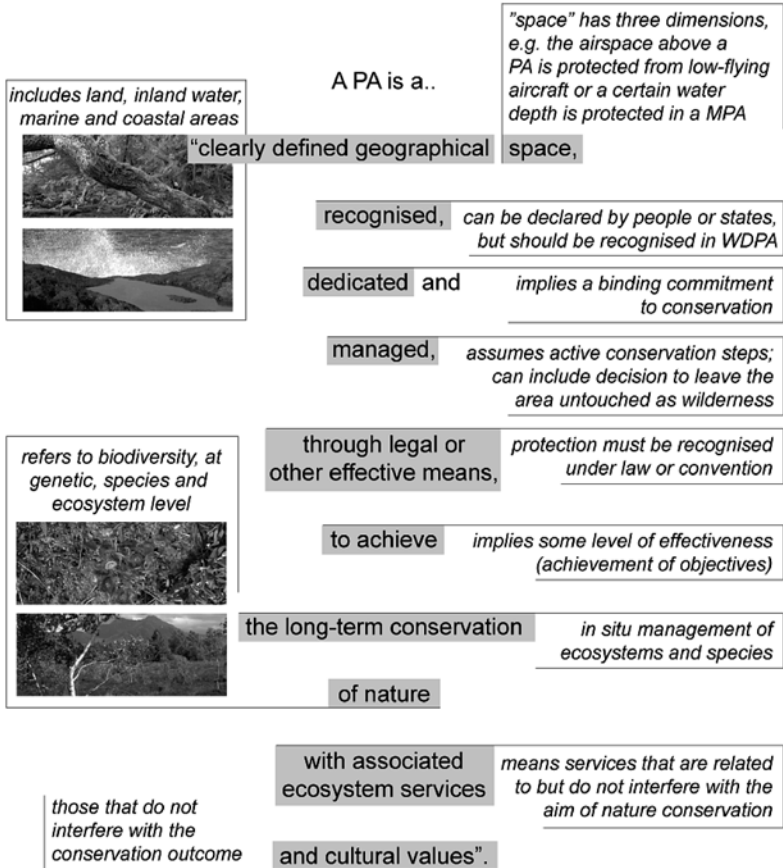


Figure 3: The IUCN definition of “protected areas”

Source: Authors’ draft based on Dudley (2008, 8f.).

PA: Protected Area; MPA: Marine Protected Area; WDPA: World Database on Protected Areas.

Box 1: The World Conservation Union (IUCN)

Founded in 1948, the International Union for Conservation of Nature (IUCN) is the world's oldest and largest global environmental network; IUCN is also acknowledged by the UN (United Nations). It represents a democratic membership union with more than 1,000 government and NGO member organisations, and almost 11,000 volunteer scientists in more than 160 countries. IUCN's work is supported by over 1,000 professional staff in 60 offices. The Union's headquarters are located in Gland, near Geneva, in Switzerland. IUCN's Programme on Protected Areas administers the World Commission on Protected Areas (WCPA), the world's premier network of protected area expertise. For more than 50 years, IUCN and WCPA have been at the forefront of global action on protected areas. More information is available at IUCN's website at www.iucn.org.

Box 2: Convention on Biological Diversity (CBD)

The Convention on Biological Diversity is a legal international instrument for the conservation and sustainable use of biological diversity. Its development was inspired by the world community's growing commitment to sustainable development. In 1992, at the Rio "Earth Summit" (United Nations Conference on Environment and Development), the Convention was for the first time opened for signature. It came into force on 29 December 1993. Today, 191 parties joined the Convention whereof 168 have signed the treaty. More information on the CBD is available at the convention's website at www.cbd.int.

Besides the IUCN and the CBD, there are, of course, numerous other international organisations and institutions promoting and pursuing biodiversity conservation. In addition, practically all countries have their own legal and management systems for protected areas, some of which are based on the above-mentioned international frameworks. To name just a few other institutions, UNESCO provides assignments of areas or structures as World Heritage Sites and Biosphere Reserves; WWF and Birdlife International are some of the important international NGOs in biodiversity conservation. Other NGOs include EuroParc Federation, Eurosite, Alparc, PanParks; other international treaties include the RAMSAR, and CITES conventions. In the European Union, of course, the Natura 2000 framework is a constituting element of protected area systems and species conservation.

Categories of Protected Areas

For the first time in 1994, IUCN published a protected area categories system together with guidelines for the application to and management of protected areas.

After an intensive process of expert consultation, these guidelines were revised in 2008.

The categories system (Table 1) is primarily based on management objectives and assigns each protected area to a certain category. This system, however, does not detail the effectiveness of management but rather focuses on the *intention* of the management authority for the site. Most countries and regions still use their own system of categorising their protected areas, such as sanctuaries, parks, conservancies, and trust areas. The IUCN system of squeezing the broad variety of management approaches into six categories can never be more than an approximation of real-world diversity in management approaches.

The categories, recognised also by the Convention on Biological Diversity, are rather considered as important framework and as global standards for the planning, establishment, and management of protected areas.

All categories in the IUCN classification system are equally important. They share (among others) the common objectives of

- conserving the composition, structure, function and evolutionary potential of biodiversity;
- maintaining the diversity of landscapes or habitats and of associated species and ecosystems; and
- contributing to regional conservation strategies (Dudley, 2008, 12).

The range of categories from I to VI implies a differentiation of protected areas regarding human intervention, the extent to which ecosystem are undisturbed from human influence, and the natural conditions (see Figure 4).

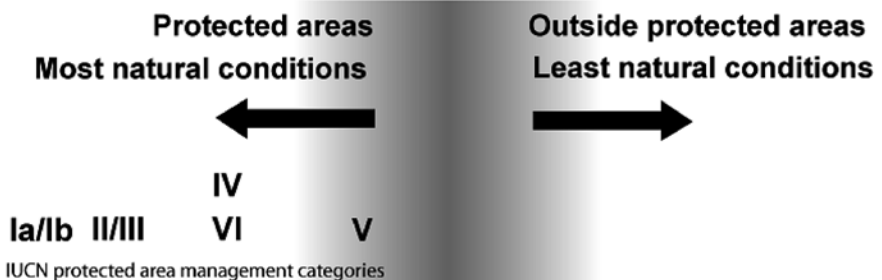


Figure 4: Degree of natural conditions and protected area categories

Source: Authors' draft based on Dudley (2008, 24).

Table 1: The IUCN Protected Areas categories system

<i>Category</i>	<i>Description</i>
Ia	Category Ia are strictly protected areas set aside to protect biodiversity and also possibly geological/geo-morphological features, where human visitation, use and impacts are strictly controlled and limited to ensure protection of the conservation values. Such protected areas can serve as indispensable reference areas for scientific research and monitoring.
Ib	Category Ib protected areas are usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.
II	Category II protected areas are large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristic of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.
III	Category III protected areas are set aside to protect a specific natural monument, which can be a landform, sea mount, submarine cavern, geological feature such as a cave or even a living feature such as an ancient grove. They are generally quite small protected areas and often have high visitor value.
IV	Category IV protected areas aim to protect particular species or habitats and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.
V	Category V is a protected area where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.
VI	Category VI protected areas conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under sustainable natural resource management and where low-level non-industrial use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Source: Dudley (2008).

2.2 Economic development in protected areas¹

Ecological capital and ecological services

The basic economic notion of dealing with ecosystem services is the differentiation between the ecological capital and the flow of services provided by this stock:

- *Ecological capital* refers to the whole stock of elements of biodiversity and natural resources, such as the full range of all elements of an ecosystem. This ecosystem consists of the different animals and plants (genetic and species diversity), and energy and material flows, dynamics and interdependencies (ecosystem and landscape diversity).
- *Ecosystem services* (environmental services) refer to the flow of goods and services provided by the ecological capital stock over a certain period of time (such as one year). The services can consist of use and non-use benefits (e.g. production of timber, recreation services; existence values).

From an economic point of view, it is practically impossible to value the ecological capital stock in money terms as such. There is, however, a wide range of economic valuation techniques that may put a money value on the flow of goods and services provided by the ecological capital, and therefore, can also value the change in the quality of the ecological capital (environmental quality).²

Important differentiations between ecosystem services providing benefits to humans lie in the spatial range and immediacy of benefits for users:

- Protected areas provide ecosystem services not only to the local and regional economy (e.g. water, timber, erosion control) but also to the national (e.g. protection of the national heritage) and global community (e.g. biodiversity conservation, carbon sequestration).
- Ecosystem services benefit humans both directly and indirectly. Use values are benefits that are enjoyed by directly using the protected area, e.g. for consumption (water, non-forest products, recreation), or by indirectly using the area, such as the benefits derived from the mere existence of the park (existence, option and bequest values).

Very often, the direct benefits of protected areas are enjoyed by users around the protected area, or by tourists visiting the park. Therefore, direct benefits are

¹ This chapter is partially taken and adapted from Getzner (2010a and 2010b).

² The current book does not detail potentially useful methods for environmental valuation. Most recent projects that present economic valuation techniques for practitioners include www.ecosystemvaluation.org, www.envirovaluation.org and www.teebweb.org. Anyway, it is highly recommended to commission valuation studies to valuation experts, or at least consult experts since any valuation exercise is highly complicated on methodological grounds.

commonly local or regional benefits, while non-use values typically concern the national or global economy. Of course, visitors also hold non-use preferences, therefore this distinction is not at all clear-cut.

Changes in production and consumption due to the establishment of a protected area

The establishment of a protected area in a region can be considered as a long-term commitment of a region, with fundamental changes of the availability of factors of production, and of consumption opportunities. Generally, economic and social development may run parallel, both influencing the availability of factors of production and the location decisions of firms. Development is usually assumed to take place in regions with sufficient factors of production such as labour, skills, capital, resources, infrastructure, and vicinity to factor and goods markets. Theoretically, we can consider a protected area such as a national park as an establishment or improvement of public infrastructure, providing specific factors of production as well as goods and services both to local firms and households (customers). While protected areas are also reasoned by the conservation of potential medical plants, by carbon storage, water retention and erosion control – all of which can have a potentially positive impact on the location of specific companies – the main issue in regional development enhanced by protected areas is certainly the increase in the number of tourists. Protected areas can increase tourism in manifold directions (Bushell and Eagles, 2007; Hjerpe and Kim, 2007; Marcouiller and Green, 2000; Nolte, 2007). First, protected areas may provide factors of production to local tourism companies, such as clean water and air, protected landscapes, local products, and information on biodiversity conservation. Second, they provide goods and services directly to tourists, for instance, exhibitions, trails, guided tours, and other nature experience specific to national parks. All other things being equal, the production of these goods and services may provide the foundation for regional sustainable development in peripheral regions. Furthermore, protected areas may specifically address issues of sustainable development, such as limiting economic activities in the park and taking the carrying capacity of ecosystems into account (Eagles et al., 2002; Behrens et al., 2009).

Biodiversity conservation – conflict or complement to regional development?

Regarding biodiversity conservation from the viewpoint of economics, the very nature of economic activities has to be borne in mind. Every economic activity, such as production and consumption, uses natural resources in the form of energy, materials, land. Of course, capital and labour are crucial inputs to economic pro-

duction. However, from the point of view of social ecology and resource economics, every single human activity is connected with the use of natural resources. While the production of services are considered less resource-intensive than industrial production, services need as underlying backbones and infrastructures a broad range of products stemming from resource-intensive industries (e.g. construction, heavy industries).

Czech (2008) has pictured the conflict between the size of the economy and the land remaining for biodiversity conservation in a simple graph (Figure 5).

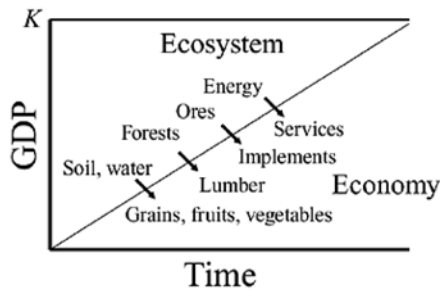


Figure 5: Reallocation of natural capital from the ecosystem and its nonhuman species to the human economy

Source: Czech, 2008.

GDP = Gross Domestic Product, the central measurement of economic activity (market value of final goods and services in an economy during one year).

With a growing economy, the amount of resources transformed to inputs of the human economy grows. That means that under scarce resources (in particular, land) the ecosystems have fewer resources left for reproduction.

With respect to protected areas, these conserve land for the protection of biodiversity. However, the extent of conservation is determined by the category assigned to the protected area, and by the stringency of the actual management plans and measures.

However, the expansion (economic development) of adjacent communities around the parks may increase the pressure on ecosystem in terms of resource use, high numbers of visitors, new infrastructures for tourists, and also utilities for the local economy (water and energy supply, waste water treatment).

Therefore, ecosystems can provide crucial services to the local economy, but can also be affected by local and regional (economic) development.

Conditions for regional development based on biodiversity conservation in protected areas

For balancing the use of resources by the local economy, and nature conservation on the other side, there is one main condition for this balance. The institutions establishing protected areas have to care for a *credibly implemented, effective and efficient nature conservation policy*.

This means that the ecosystem services needed for the local economy must be secured in the long run, and not be jeopardized by short-term considerations. Otherwise, the unique selling proposition of the region is lost. The potential conflict therefore has to be solved in terms of strict biodiversity conservation. Only if this aim is fulfilled, the ecosystem services specific for the protected area can be provided and “used” by the local and regional economy.

Such a policy presupposes essentially three main frameworks after the establishment of the protected area:

- Authority of the park administration over measures and policies within the park boundaries: The park management not necessarily has to be the land owner, but has to have the full authority over all relevant activities within the park.
- Effective ecological management plan: During the life-cycle of a park, there are numerous activities (see IPAM, Integrative Protected Areas Management, www.ipam.info; and the descriptions in the current book). However, the central part of management is certainly an effective and efficient ecological management plan with which the policies can be implemented.
- Sufficient financing of protected areas management and policies: Without a sufficient funding of park administrations, effective policies cannot be implemented.

These three major policies secure that the parks conserve their ecological capital for future provision of crucial ecosystem services in a sustainable way, that management policies are effectively implemented, and that the park can also be “used” for regional development in the long run. Otherwise, the ecological capital may be deteriorated, and the ecosystem services unique for the single parks may be reduced in the long run.

While the above-mentioned aspects can be influenced by the national park administration and have to be set up by the local, regional and national nature conservation institutions, it is also of crucial importance to consider an additional aspect in regional development policies.

Park administrations have to be involved in regional planning and development. That means that the regional development plans and strategies have to account for the existence of the park, of the provided ecosystem services, and have to direct

the regional strategy with respect to the “use” of the park for regional development. Only with coordinated efforts of the park management and the regional and local planning authorities, joint design and implementation of development strategies are effective. It is not only crucial to establish a formal system of communication and cooperation, but the park management has to set up a communication platform for regional development in which regional stakeholders can discuss park policies, and also assess economic consequences of park policies.

Sustainable development and protected areas

Biodiversity conservation, for instance in protected areas, may contribute significantly to the future provision of ecosystem services. The benefits of conservation, however, are not only locally enjoyed, but also accrue to regional, national and even global beneficiaries.

As many protected areas are located in peripheral regions – regions where most “biodiversity hot-spots” (Friedl et al., 2007) can be found –, the issue of sharing the benefits of biodiversity conservation is most important. Many studies have found that protected areas can substantially contribute to the livelihood of local residents (cf. the overview in Salafsky and Wollenberg, 2000). This contribution is particularly important in developing countries where many households depend on natural resources (ecosystem services) for provision of livelihood (subsistence) as well as cash income.

Protected areas are increasingly becoming more than only public interventions to land use in order to conserve biodiversity (genes, species, ecosystems, landscapes). Protected areas are nowadays multidimensional projects and processes with a wide range of aims, depending on the “kind” (category) of the protected area (PA). While biodiversity conservation is at the centre of PA objectives, protected areas are connected with an increasing range of different aims.

While developing countries are especially rich in biodiversity, poor and peripheral regions in developed countries such as in Central Europe also exhibit above-average species and ecosystem diversity. This concentration of biodiversity has implicitly been recognized by the Convention on Biological Diversity (CBD), passed in 1992 at the UN conference on environmental and development (UNCED) in Rio de Janeiro, with its reference to the importance of benefit sharing of biodiversity conservation. While the conference concentrated on an integration of environmental and equity issues, it was also acknowledged that the sharing of conservation benefits is a prerequisite for effective conservation management and poverty reduction (Convention on Biological Diversity: Secretariat of the CBD, 2005). As such, the conservation of biodiversity is important for regional sustainable development both as a precondition for sustainability, as well as a major

potential consequence of securing the livelihood of residents, and of regional development (Wells and McShane, 2004). The conservation of biodiversity therefore can integrate the crucial dimensions of sustainable development (cf. for instance Barker and Stockdale, 2008; Dudley, 2008):

- (1) Biodiversity conservation contributes, of course, to the ecological aims of sustainable development by protecting genetic, species, ecosystem (habitat) and landscape diversity; the conservation of biodiversity in situ in national parks is especially important due to the stringent ecological management plans and subsequent international monitoring. Hence, the establishment of a national park preserves the natural capital by observing the carrying capacity, and limiting and steering visitor flows which would otherwise be a threat to the ecological integrity of the regional ecosystems.
- (2) Biodiversity conservation, with its aims of providing benefits for the local population, also contributes to the economic dimensions of sustainable development by supporting the livelihood of people and the regional/local economic development, provided that potential conflicts between economic and ecological development are solved (i.e. ecological and economic goals are considered as complementary). Regional economic sustainable development may therefore be supported since local residents find new income opportunities which are also ecologically sustainable – options which only a protected area is able to provide.
- (3) Biodiversity conservation also contributes to the social goals of sustainability, by distributing the costs of conservation equally among stakeholders (and national and international tax payers), and by empowerment and participation of (otherwise marginal) stakeholder groups. In addition, further aging of the population may be reduced, and a favourable population structure may be supported.

In European countries, the problem of poverty alleviation is certainly much less dramatic than in developing countries. However, the public debate on biodiversity conservation – especially conservation in situ in protected areas such as national parks, nature reserves, landscape conservation areas – is very much focused on an equal sharing of the burdens (e.g. local land owners and holders of land-use rights) and on providing benefits for the local residents besides the aims of protected areas for nature conservation, education and scientific research (WCPA, 2000). For instance, Mose (2007a) has presented a range of approaches and models for protected areas and regional development. It turns out that, in general, protected areas can enhance regional sustainable development. However, it is of equal importance to address adequate management strategies, e.g. regarding inclusion and participation of all relevant stakeholders in order to maximize benefits of establishing and managing protected areas. The existing Central European case studies

(e.g. Mose, 2007b; cf. also Kletzan and Kratena, 1999; Getzner, 2008; Getzner, 2003; Getzner and Jungmeier, 2002; Hammer, 2007a; Hammer, 2007b) concentrate on a broad range of topics, such as

- impacts of protected areas on regional (economic) development;
- economic effects of expenditure due to establishing and maintaining a protected area;
- issues of acceptance and identity;
- tourism, visitors' motives to visit the region, and expenditure of tourists.

In many case studies, quantitative research is limited, often due to the lack of consistent time series of relevant socio-economic data. For instance, one of the major Austrian studies (Fleischhacker, 2001) presupposes that national parks, as a main category of protected areas, lead to enhancing tourism in national park regions. However, this conclusion is drawn on the basis of qualitative research and assumptions about the potential regional impacts of protected areas. On the other hand, studies on certain aspects of regional development are quantitative but limited on value added and employment effects of protected areas (e.g. Getzner and Jungmeier, 2002).

2.3 The “life cycle” of a protected area

Decades of planning and intensive discussions

Today, more and more protected areas develop from “pure” nature protection sites to model areas for a balanced development of natural resources, economic performance and social justice and development (sustainable development). From the very first idea to its final implementation and permanent management, the formation of such parks is a complex task involving intensive planning and public debates.

Based on international experience, guidance and expert assessment collected in the so-called IPAM (Integrative Protected Area Management) project³, the design and development of a protected area during the “life cycle” can be divided into

³ In 2003, an INTERREG funded project was approved with the aim of facilitating the integrated management of protected areas in Europe by developing a kind of “Wikipedia” for the management of protected areas, the so called “IPAM toolbox”. The IPAM toolbox was developed by E.C.O. Institute for Ecology (Klagenfurt). The project involved project partners from Italy, Hungary, Slovenia, Czech Republic and Austria, and was supported by the expertise of several international organisations such as IUCN, UNESCO, Ramsar Convention and EUROPARC Federation. More information about the toolbox and the whole project is available at the project's website at www.ipam.info. An explicit demand for such a toolbox had already been expressed by IUCN, by UNESCO's MAB Program and by the Convention on Biological Diversity.

four principal phases (periods) and 25 related “Fields of Activity” (FoA) (see Figure 6).

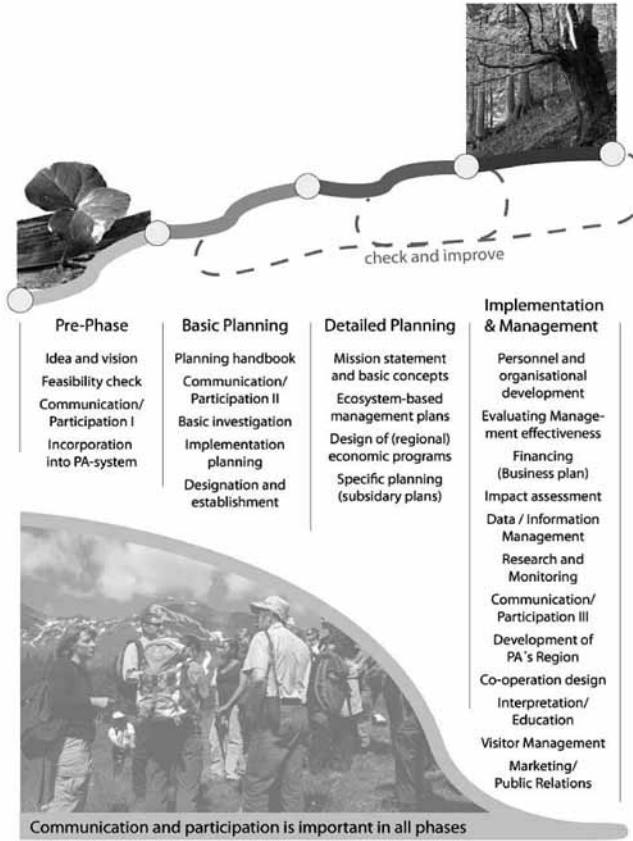


Figure 6: The life cycle of a protected area

Source: Authors' draft based on the IPAM toolbox.

- During the *preparatory phase* (“pre-phase”), the first ideas for the establishment of a protected area are collected and discussed publicly, a feasibility check is made, and a first direction of the further development is drafted.
- The *planning phase* is divided into the period of *basic planning* which includes basic research, and planning of designation and implementation, and ends with the legal nomination of the area as a protected area; and into the

period of *detailed planning* with a focus on specific plans for the ecosystems (ecological management plan), regional economy, management set-up, and monitoring. The focus on the latter is to establish a system of adaptive management, and clear institutions and rules for transparent responsibilities and decision-making.

- The *implementation and management phase* begins with the legal establishment of the protected area and involves the full range of management activities such as business planning and management, visitor steering and infrastructure, marketing and day-to-day business decision making.

Certainly, the different periods (phases) during the “life-cycle” of a protected area are overlapping and interfering with each other. Such a classification is therefore not a stringent (rigid) concept but can rather be considered an instrument in improving and allowing for a deeper understanding of the different processes of the management of protected areas. The authors’ experience, for example, shows that the intensity of the public debate and conflicts within a region may differ according to the respective phases of a protected area’s life-cycle (Figure 7).

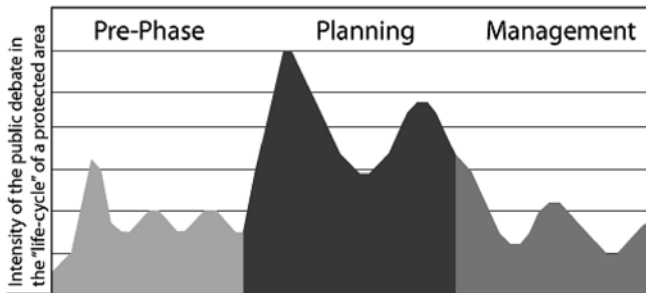


Figure 7: Intensity of the public debate in the different periods of the “life-cycle” of a protected area

Pre-phase

FoA (Field of Activity) -1: Development of Idea and Vision. The idea of establishing a protected area is often raised and developed by a limited number of people (stakeholders) dedicated to the conservation of biodiversity. By involving all relevant stakeholders a broader vision has to be agreed upon in an extensive process of discussion and debate.

FoA-2: Feasibility Check. Once the vision of developing a protected area is clear, the feasibility of its implementation is analysed by focusing on the regional situation in spatial, socio-cultural and economic dimensions. Potential problems or risks are identified and balanced with the opportunities for the region stemming from the potential establishment of a protected area.

FoA-3: Communication and Participation I. Previously identified stakeholders are informed in an appropriate way and have the chance to become involved in the further planning process. Already at this stage, it is also crucial to involve potential opponents of the prospective protected area.

FoA-4: Incorporation into PA-Systems. The site to be developed as a protected area is envisioned to fit into the existing national (and international) protected areas system. Core functions and unique attributes of the intended protected area are identified.

Basic planning

FoA-5: Planning Handbook. The basic planning processes of a protected area are set up as precisely as possible in order to avoid misunderstandings, mistrust, or potential flaws which consequences may multiply during the further planning and management of the site. The “road map” for the whole process can nevertheless differ considerably according to environmental, economic or legal conditions of a particular region, and has, of course, to be adapted to changes in the relevant frameworks.

FoA-6: Communication and Participation II. Involving a broad range of stakeholders allows for a better understanding of the potential resistance and generally also increases the acceptance of the protected area. Key-players are identified, regularly informed and invited to contribute to the planning of the protected area.

FoA-7: Basic Investigation. All kinds of data and information are collected for the planning process, such as ecological and economic data, GIS (Geographical Information System) and remote sensing data.

FoA-8: Implementation Planning. The implementation plan contains all basic information required for the (legal) designation of the protected area, for instance, fixed boundaries, proper zoning and a defined organisational structure. The implementation plan also has to correspond to the legal frameworks and the international requirements of the chosen protected area’s category.

FoA-9: Designation and Establishment. The (legal, official) designation is the final act of the basic planning process. After a successful application the new protected area is nominated by national or European legislation and/or an international organisation (e.g. UNESCO, Ramsar Convention). The establish-

ment includes the formal (legal) set-up of the protected area (e.g. legal and organisational implementation).

Detailed planning

FoA-10: Mission Statement and Basic Concepts. Once a protected area is designated, it has to be pointed what it stands for. A mission statement highlights the core values and objectives of the site in a few words. A corporate identity is developed to express and promote the mission of the protected area.

FoA-11: Ecosystem-based Management Plan. An ecosystem-based management plan indicates how the habitats and species in the protected area can be used, developed and managed in order to achieve the conservation objectives. A monitoring system is established to measure the effectiveness of all management activities.

FoA-12: (Regional) Economic Programmes. Nature conservation does not necessarily prevent economic development. In contrast, protected areas often stimulate regional economic development as the PA often attracts tourists and provides a platform for presenting, promoting and selling regional products and services.

FoA-13: Specific Planning (Subsidiary Plans). Certain issues such as public and private transport and waste (water) treatment may affect a protected area. They are taken into account when planning and managing the site.

Implementation and management phase

FoA-14: Personnel & Organisational Development. A particular type of organisation (e.g. limited company, government body or authority, community or NGO based management) and professional staff are chosen to form the managing structures of the protected area. Specific emphasis lies on the management of change from organisational as well as economic and ecological viewpoints.

FoA-15: Evaluating Management Effectiveness. The whole process of establishing a protected area is monitored and evaluated, from site-based actions to broad political and policy reviews. SMART (specific, measurable, achievable, relevant, time-bound) indicators have to be defined which can easily be monitored.

FoA-16: Financing (Business Plan). Financing is one of the major concerns of protected areas. The expected earnings and expenditures are usually presented and forecast in a business plan. When planning the financial component of the protected area's business plan, the benefits the park to its customers (e.g. local and regional stakeholders, visitors) are to be considered. Innovative ways of funding are discussed and developed. A good mixture of funding sources can

substantially widen the financial opportunities and independence for a protected area (financial sustainability of PAs).

FoA-17: Impact Assessment and Limitation. Protected areas may be affected by other infrastructure projects such as road construction, electricity production, industrial or housing development. In such cases, public authorities and, often, legal regulations, require an assessment of the environmental impacts on the parks ecology. Park staff may offer to pre-check a planned project. Therefore, clear procedures for impact assessment have to be established to ensure transparency and completeness of potential impact assessment processes.

FoA-18: Data and Information Management. An ICT (Information and Communication Technology) system is developed according to the specific needs of the park in order to collect, store, control and disseminate information and data relevant to the protected area.

FoA-19: Research Setting and Monitoring. It is generally advisable to prepare an overview on the research already available or still required by the protected area. A long term monitoring programme is set up.

FoA-20: Communication and Participation III. All relevant stakeholders are permanently involved in the ongoing management activities (participatory management). However, a clear differentiation is made between decision-making, controlling, and consulting bodies, and informative groups of stakeholders. Differentiated technical information is provided to stakeholders, decision makers and the broad public.

FoA-21: Development of PA's Region. Developing the region of a protected area means that there will most likely be a need to adjust or develop regional strategies, policies, programmes and guidelines with the focus on social, economic and ecological sustainable development.

FoA-22: Co-operation Design. For the long term benefit of the protected area a strategic network is created with regional, national and international partnerships including, for instance, individuals, NGOs, governmental institutions, international bodies, and umbrella organisations.

FoA-23: Information, Interpretation & Education. With few exceptions, protected areas have the task of educating and raising public awareness regarding nature, ecology, sustainability and related issues. The core messages and target groups are clarified in order to plan and manage all educational and information activities.

FoA-24: Visitors, Services & Infrastructure. Visitor management, which includes regular ways of collecting feedback and opinions the PA's customers, is one of the main tasks of PA management. The needs of visitors, local tenants and residents are equally considered. A well balanced range of infrastructure and an adequate visitor programmes has to be provided. The behaviour, activities

and spatial distribution of visitors as well as the feedback mentioned above is recorded for strategic purposes.

FoA-25: Marketing and Public Relations. A professional marketing approach comprises several key elements, like client analysis, product definition, development and contribution, competition evaluation, strategic partnerships, campaigns and advertising. Protected areas can be promoted as a regional or even national “brand”.

Different levels of stakeholder involvement

Figure 8 shows that within each Field of Activity (FoA) different stakeholder groups are commonly involved in different degrees of intensity.

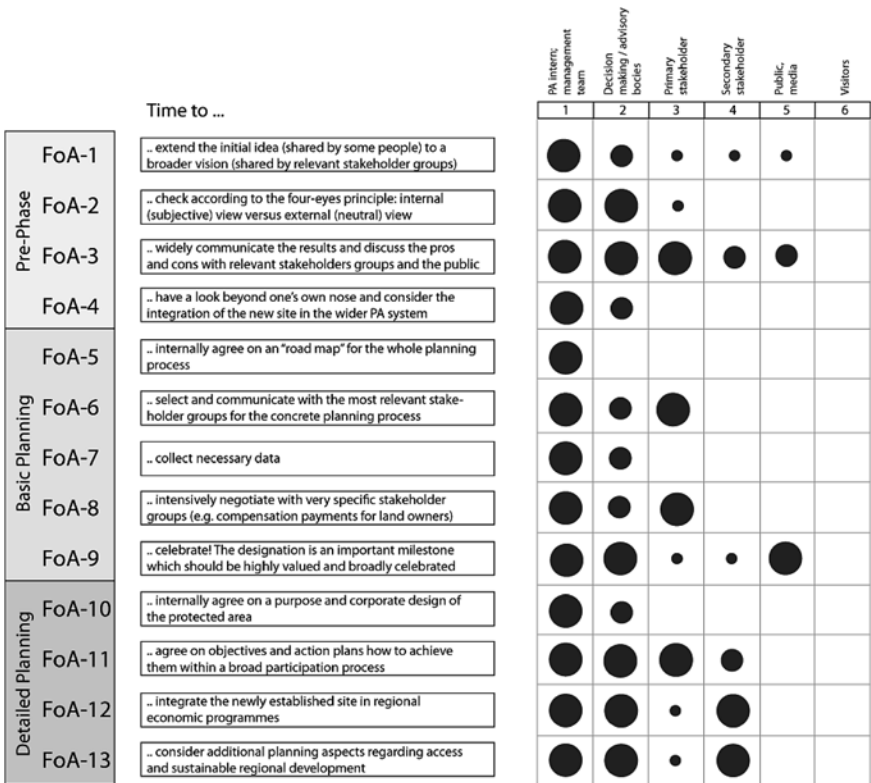


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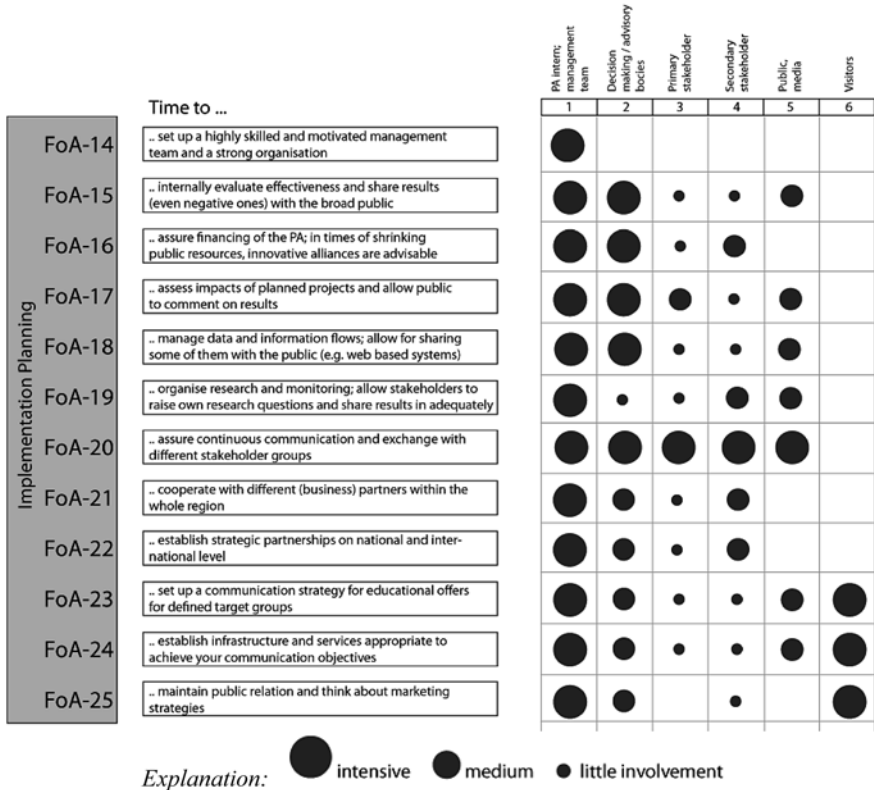


Figure 8: Overview on stakeholder involvement in the different fields of activity

Assessment of management effectiveness during the PA life-cycle

As shown in the previous section, the life-cycle of a protected area and the respective fields of activity in protected area (PA) management (FoA) serve as a comprehensive structure to define and present the different management activities. However, the complex field of PA management impedes an equal understanding, a proper description, and a standardised evaluation of management activities. Therefore, the IPAM toolbox has been developed in order to help PAs in assessing their activities over life-cycle for completeness and effectiveness. The web-based

and freely accessible IPAM (Integrative Protected Area Management in the Alps-Adriatic Region) toolbox is intended to support planners, managers and consultants of protected areas. The self-assessment as part of the IPAM toolbox is an interactive checklist of questions helping to identify the most recent state of the development of protected areas resulting in a progress report (Jungmeier et al., 2005; www.ipam.info).

The following example, carried out in the course of the NATREG project (cf. chapter 5.3 at page 208 (appendix), provides an overview on the IPAM toolbox and its benefits.

Joint use of the IPAM toolbox

Using the IPAM toolbox in the NATREG project, representatives of the Deliblato Sands (Serbia), Pohorje (Slovenia), Vellacher Kotschna (Austria), Delta Po River (Italy), and Mura-Drava River (Croatia) protected areas participated in the assessment workshop.

Basically, the assessment of the status quo, in which a PA is currently in, helps to identify problems and should support future planning of various management issues within the frame of the NATREG project. The main aims of the self-assessment are:

- Identification and description of the “big picture”: By putting together small site-specific pieces of management activities, the profile of the PAs and the connections between certain activities are made visible.
- Assessment of the management performance: The status-quo of management (what is being managed to what extend) is analysed by a systematic, standardised checklist.
- Draft of a SWOT (strengths, weaknesses, opportunities, threats) analysis: Upon the answers of the questions (more than 100 in the IPAM toolbox), strengths and weaknesses, causes and effects regarding management issues are analysed.
- Benchmarking: By comparing the individual situations and SWOT analyses with results for other sites, similarities as well as divergences can be identified.
- Exchange of knowledge: Discussions based on standardised structures and individual results facilitate the sharpening of the common understanding on management issues as well as the learning from others’ experiences and approaches.

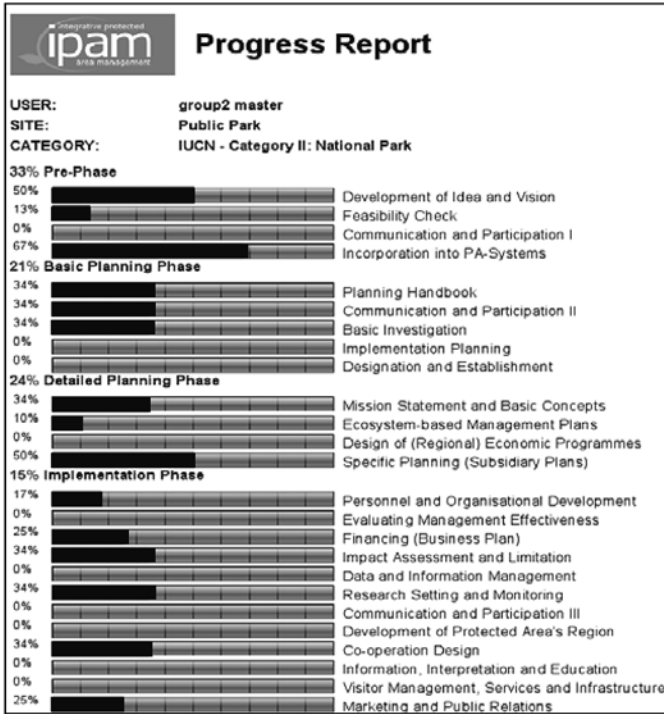


Figure 9: IPAM progress report for fictive nature conservation site

Results of the IPAM assessment procedure

After answering the manifold questions in the self-assessment tool, a progress report is prepared by the IPAM toolbox for each PA. The report provides an overview on the progress of management activities along the life-cycle of the PA and is basis for further evaluation. Figure 9 presents the progress report for a fictive nature conservation site. The standardised progress report is tailored to the individual users and sites. A set of management activities (25 fields of activities), which is divided into the four phases, is evaluated. The greener the respective bar, the more of the management activities has been implemented. In contrary, gray bars show low activities within a certain field. The percentages on the left-hand side show the degree of fulfilment for each activity as well as the summarised number for each of the phases.

Some of the results – drawn by detailed evaluation of and discussions on the report – can be depicted as follows:

- *“Blind spots” and “spot lights”*: Many potential management activities within the involved NATREG sites are not being carried out at all, whereas others seem to be focal points. The lack of activities regarding the elaboration of basic management concepts (e.g. management plan) and financing (e.g. business plan) as well as the development of personnel and organisational capacities, and communication and participation are responsible for a various number of problems. At the same time, all the PAs seem to have performed reasonably regarding their data and information management, research setting and monitoring, and visitor management activities (services, information and interpretation, marketing).
- *Management according to “European standards”*: The results of the joint workshop of NATREG protected areas indicate decreases of management performance over the life-cycle of the sites. For “young” PAs such as Pohorje, Mura-Drava, Delta Po River protected areas, the progress report suggest that management performances evolves in a positive direction. However, for the “older” PAs in the group (Deliblato Sands, Vellacher Kotschna, Delta Po River), management performance decreases over time, and that the management of the sites becomes much more complicated with the range of tasks and stakeholders to be treated with.
- *Connections between different management activities*: At all sites, management activities according to the different fields of activity (FoA) are quite different. By assessing these activities by means of the IPAM toolbox, dependencies and connections between these activities become visible, for instance, the evaluation of management effectiveness presupposes targets defined by a management plan.
- *Identification of the participation framework*: Participation as a main topic within the NATREG project was specifically emphasised within the discussion process of the workshop. As a general conclusion, participation within the NATREG sites shows a wide spectrum; for instance, at Deliblato Sands, participation was considered “not to be necessary”, while at Pohorje, “stakeholder plurality” was of crucial importance (Figure 10). These examples show that stakeholder participation includes potentially different levels of participation, from information and consultation to inclusion in decision making processes (cf. chapter 2.4).

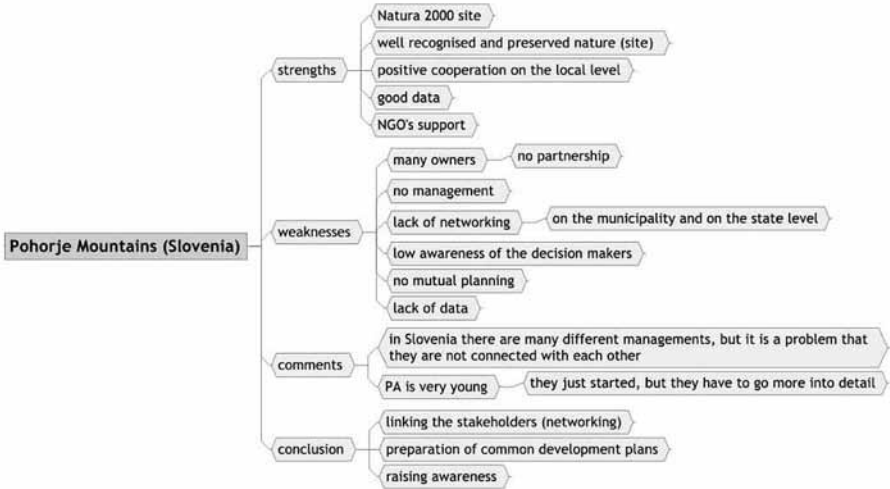


Figure 10: Results of a SWOT analysis for the Pohorje protected area

2.4 Communication and participation in the life cycle of a protected area

Basics of communication

“One cannot not communicate”, is the first of five basic postulates for communication developed by P. Watzlawick, an Austro-American psychologist and philosopher (1921–2007). Any behaviour, even if not a single word is spoken, is some kind of communication (Watzlawick et al., 1969).

Establishing a protected area is usually connected with extensive communication and participation activities. Generally, communication and participation in a protected area consist of a broad range of different approaches such as information events, discussions, meetings with opinion-leaders, press releases, and articles in the media. Even with no communication efforts, people talk about the protected area. By not including the stakeholders in the region, the park non-verbally communicates that the (proposed) protected area is not interested in the concerns of residents. In the case of a wilderness area with solely ecological aims, the interests of local residents may be neglected, and fauna and flora seem to be considered more important than humans. But even in this case, by sending this type of “message”, one can only conclude that the protected area eventually will not be well

supported, and as a result the objective of preserving biodiversity may not be achieved in this region. It is therefore of crucial importance to understand that the effectiveness of biodiversity conservation and park management not only depends on ecological management plans and visitor steering but also on the general acceptance of the existence of the park by the people living in a region. This is especially significant in parks with very tight budgets where voluntary commitment and ecologically sensitive behaviour also outside the park can have a great impact on the park's ecology.

“Every communication has a content and a relationship aspect; thereby the latter determines the former one”. This second axiom postulated by P. Watzlawick was further developed by Schulz von Thun in 1981. According to his “four sides model” each communication has four aspects (cp. Fig. 9):

- the facts somebody wants to convey (pure content),
- some information about the sender (self-revealing aspect),
- some information about the relationship between sender and receiver (emotions), and
- the appeal sent out with the message (what reaction does the sender want to achieve).

These different aspects have to be considered when communicating with stakeholders. Especially the concept of relationship seems to be important as often prejudices exist due to former conflicts related to nature conservation or a lack of understanding and acceptance between different interest groups (e.g. conservationists versus hunters). “Keep in mind that emotions always dominate the facts. And true is *not* what person A *says*; it is what person B *understands!*” (Schröder, 2008).

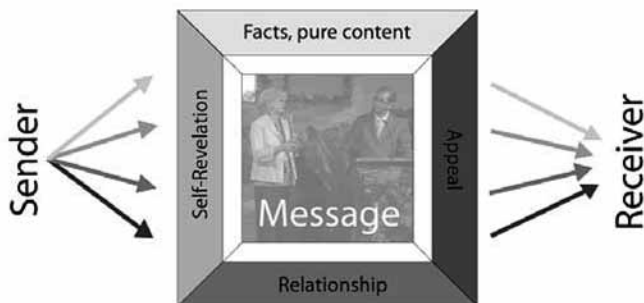


Figure 11: Four sides communication model

Source: Authors' draft based on von Thun (1981).

Conservationists often find it difficult to leave their scientific (or political) roles, start talking to locals and consider their different perceptions and interests. However it is not sufficient to simply tell people about the significance and loss of biodiversity so that they can act accordingly. Planners of protected areas need to use communication differently, and actively involve people rather than just make scientific information available to the public (Hesselink et al., 2007).

Over the last 40 years there has been a paradigm shift in the role of protected areas from strictly protected reserves not considering the impact on local people (top-down approach) to a broader conceptual and practical approach including sustainable use and participation processes (bottom-up approach). Before 1970, “many protected areas came into being at a simpler time in a less complex world” (Phillips, 2003, 12). It was assumed that “governments knew best, and public opinion was something not to be influenced by”. Currently, it is recognized that protected areas contribute, besides their conservation function, to (regional) sustainable development, human welfare, and even poverty alleviation. A much broader range of stakeholder groups with an equally broad range of interests and agendas in protected areas has to be addressed and involved in the participation processes. Nowadays, communication processes play a crucial role in gaining cooperation of individuals, organisations and all kinds of different interest groups in society to act on and reduce the drivers for biodiversity loss. Since the 4th World Parks Congress, held in Caracas in 1992, the importance of participation processes is increasingly emphasised by international organisations, such as the CBD (2004), IUCN (2005) and UNESCO (1995 and 2008).

Basics of participation

The term participation has more than one meaning. There are some people who already talk about participation if people are informed through mailed flyers. For others, real participation only takes place when local interest groups are allowed to participate in the decision process (Pfefferkorn et al., 2006). The meaning of participation ranges from a mere exchange of information to consultation and finally to participating in decision-making processes (see Figure 12). None of the international organisations specifies what level of participation is adequate for the establishment and implementation of a protected area. This has to be decided case by case, as the situation and conditions will vary for different regions.

It should be noted that at the beginning of each communication process the chosen level of participation needs to be made clear to the persons who will be involved in the process, and that those who organise such processes (usually the park’s proponents or managers) first have to define aims, objectives, organisation, time frame and extent to which stakeholders are involved. This includes that there

can be “too little” as well “too much” of the different forms of participation, depending on the content and the respective stakeholder group.



Figure 12: Different levels of participation in protected area’s planning and establishment

Source: Authors’ draft based on Pfefferkorn et al. (2006, 16).

Strategic planning of communication and participation

Communication and participation processes have to be planned strategically, with key stakeholders being identified prior to deciding how to involve them or what to communicate to them.

Who are the key stakeholders?

One method of determining who the park’s regional stakeholders are is to ask the following questions (Thomas and Middleton, 2003):

- What are people’s relationships with the area? How do they use and value it?
- What are their various roles and responsibilities?
- In what ways are they likely to be affected by any management initiative?
- What is the current impact of their activities on the values of the protected area?

Once an overview is gained, the stakeholders may be classified according to their interests, concerns, attitudes, influence, rights, or knowledge. Principally, interest groups can be distinguished as follows (cf. Alexander, 2008):

- Primary stakeholders: those who are directly affected, who may benefit or suffer loss or whose permission, approval or (financial) support is required (e.g. land owners, farmers, hunters, governmental institutions).
- Secondary stakeholders: those who are indirectly affected such residents of an area which shall be nominated as a protected area.
- Tertiary or key stakeholders: those who are not directly concerned but have significant influence or political power (e.g. politicians, opinion leaders, local and regional NGOs); this interest group can also belong to any of the first two groups.
- Other stakeholders: those who have some interest in the specific protected area, or generally, in nature conservation (e.g. general public, scientists, tourists, other protected areas, other NGOs).

The degree of concern and influence of the different interest groups may be visualised in a stakeholder matrix (such as the one shown in Fig. 11). As a prerequisite, it is recommended that the attitudes (acceptance or refusal) of the stakeholders that are deeply involved and/or are highly influential are assessed.

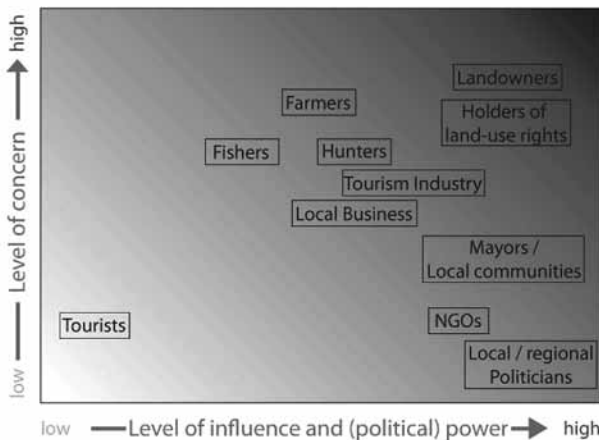


Figure 13: Stakeholder matrix showing the degree of concern and influence of the different interest groups

What to communicate?

Once the key target groups are chosen, it has to be defined which key messages should be communicated to which group of stakeholders.

In general, for communication processes, some basic principles should be considered (Schröder, 2008):

- Addressing the “mind” (rational level) but also the “heart” (emotional level) of the park’s audience;
- Reducing complexity of information down to short and easily understandable messages;
- Preference for dialogues instead of monologues including listening and asking;
- Argumentation towards interests instead of positions, goals instead of measures;
- Transparency in handling concerns and suggestions.

Communication in nature conservation typically aims at triggering a change of mind or behaviour. In order to allow for changes several options on how to overcome existing obstacles need to be discussed when drafting the PA’s management strategy. As a result of such process, stakeholders themselves may be encouraged to find or contribute to solutions. “Keep in mind: If you want to achieve something, give the credits to the others, do not claim them for yourself!” (Hesselink, 2008).

How to involve stakeholders?

There are several ways of informing and involving local people in the process of developing a protected area (see the full list of participation approaches and methods in the appendix, chapter 5.2 on page 203).

Information (one-way communication)

The first step of participation is the provision of comprehensible and audience-specific information. In order to be able to participate in a decision-making process, stakeholders must at least have some basic information and knowledge about the topics to be discussed. Several measures for spreading information can be considered for a PA participation and communication strategy.

Distribution of leaflets: The message included in leaflets should be positive, simple and brief, and be communicated in visually interesting and appealing ways. The target groups and the way of distribution should be determined before starting to design the leaflets. The effects of a leaflet should always be pre-

tested by confronting uninvolved people with the message (“disaster check”). By the way, people remember pictures better than words!

Information (evening) events (presentations, discussions): A convenient location and time should be chosen. The level and amount of information presented has to be adapted to the concerns of the invited participants. Everyday experience and examples help to raise interest in the respective issues. However, sometimes the attitudes of stakeholders become worse after the first information event. Follow-up activities are therefore strongly recommended; otherwise rumours and fears may easily spread. Presentation of information also has to consider that only a small part of information (about 10 percent) is remembered by the audience in a longer time perspective.

Provision of information platforms: Information platforms keep their users posted. Platforms can be either organised as periodic personal meetings, newsletter or a web site (including a “Frequently Asked Questions” page). The information presented should be brief and up-to-date; it should be made clear, that no decisions are taken by members of information platforms.

For any of the above-mentioned events or platforms, it is crucial that opinion leaders and local stakeholders are involved in the planning of the information instrument. Public relations (P.R.) connected to these events are equally important (e.g. regular contacts with journalists or broadcast stations). Furthermore, when meeting in person, local products should be offered, and small gifts may be available.

Consultation (ranging from two-way communication to participation in decision-making processes)

Once people are informed about the idea of establishing a protected area, it has to be decided whose opinions should be considered in the planning phase and who might even be allowed to participate in the decision-making process. For deciding which stakeholder groups (based on a stakeholder matrix; see Figure 13) should be invited for participation in the decision-making process, a ready-made “check-list” does not exist. The choice of participating stakeholders depends, on the one hand, on the local and regional context, but on the other hand, also on the legal and institutional frameworks of the responsible government or planning authority. For instance, some nature conservation laws might prescribe the inclusion of certain stakeholder groups. During the preparatory work for stakeholder analysis and participation, it may turn out that the stakeholders and their degree of participation cannot be defined a priori. Therefore, a participatory decision-making process has to be framed in order to be (or seem to be) arbitrary, but that is otherwise open and flexible enough to include additional opinions and forthcoming knowledge. The latter argument is important insofar as all participation processes are crucial for

gaining local tacit knowledge which usually is not codified (i.e. included in statistics or published documents).

Several methods exist that facilitate two-way communication and further involvement of stakeholders; in the following, some examples of such methods are described.

Kitchen table talks involve face-to-face communication in a relaxing atmosphere and may be used to convince opinion-leaders or critics in the region to facilitate conflict resolution, pass on individually balanced information, and gather interesting and sometimes crucial details.

Field trips allow for complex issues to be best described when experiencing an ecosystem directly (vivid examples). On the spot, different user groups (e.g. farmers, foresters, hunters) have the opportunity to explain their specific needs and plans for the future; by changing perspectives a deeper understanding of complex problems may be achieved. Time for observations and technical discussions is as relevant, as are social interactions.

Workshops or working groups: In workshops different actors work together on specific topics; it has to be assured that they have a similar information level; the time resources of the participants should be considered. It is important not to invite too many people as not everyone will get the opportunity to express his/her opinion (small groups). External moderators are recommended, and the objectives and roles of the participants should be made clear at the beginning of the meeting.

A good working atmosphere significantly contributes to the success of a workshop. Several presentation or participation techniques encourage the attendance and creativity of the participants, amongst these are the seating arrangements (see Box 3), visualisation techniques (see Box 4) or the “World Cafe Method” (see Box 5). Another method is the joint draft of a “Memory Map” of a certain process (see Box 6).

In general, it should be clear to participants how the results of a working group are achieved (process accepted by participants), and how the results are used. In such setting, even those who might not agree with the majority to the results achieved can accept the *process* as a decent one (Getzner, 2002).

Steering committees: Here the members either suggest solutions or are actively involved in taking decisions. In order for the steering committee to function properly clear organisational and processing structures need to be in place. It should be noted that items to be addressed should be decided prior to the meeting.

Virtual forms of communication: The Delphi method is an interactive approach which relies on a group of selected experts. The experts answer questionnaires on a specific topic in two or more rounds. After each round, an anonymous

summary of the experts' opinion is provided together with the reasons for their judgments. Thus, experts are encouraged to revise their earlier answers in light of the replies of other members of their panel. It is believed that during this process the range of the answers will decrease and the group will converge towards a consistent answer (Linstone and Turoff, 1975).

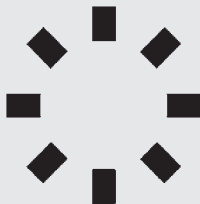
Box 3: Seating arrangements

Seating arrangements are usually left up to chance, but where a participant sits may actually influence overall meeting effectiveness. Thus, seating should be matched with the respective goals of a meeting:

Problem solving (a) requires a high level of interaction; the seating has to reflect equality. Sitting in a circular pattern avoids positioning someone at the head of the table – an indirect placement of power. Round table arrangements encourage contributions from all participants.

In *presentations* (b), the presenter needs to be visible for all participants. A U-shaped arrangement promotes equality and interaction and allows the presenter to move freely to the individual group members and address individuals.

For *decision-making processes* (c) a rectangular table should be chosen. Identifying a leader who can facilitate, direct and moderate discussions will help to keep the meeting focused. Placing two individuals with “aggressive” personalities next to each other should be avoided.



(a)



(b)



(c)

Box 4: Visualisation techniques

Two of the main facilitating techniques are “asking” and “visualising”. The combination of both techniques helps to structure meetings and increase participation and creativity. Here are some examples for certain techniques (e.g. Rees, 1998):

- *Flashlight* (=participation): short statements are collected of all participants on a specific topic; this gives an impression of the variety of opinions, feelings and prejudices.
- *Brainstorming* (=collecting ideas): based on a specific topic, all participants are asked to come up with ideas and associations which are written down at a flip-chart visible to all participants. At this stage, comments to other participants’ opinions should be avoided.
- *Clustering* (=structuring ideas): collected key words / ideas that somehow fit together are marked with the same colour.
- *Moonview* (=encouraging to “think big”): the participants are encouraged to open their horizon by setting “every day obstacles” (e.g. lack of money, existing laws) aside.

Box 5: “World Café Method”

The World Café is a simple methodology for encouraging conversations among 25 (or less) participants about defined questions. The method allows for collecting the ideas and experiences of each group member in a very short period of time (1.5 to 2 hours). If the topic is boring or irrelevant, the conversation may drift to small-talk.

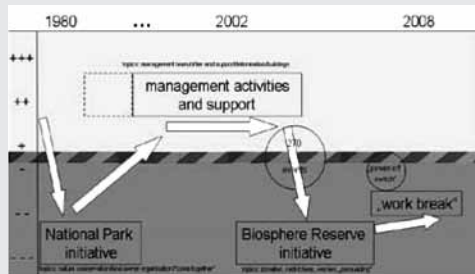
Preparation: Put four tables in the room; equip each table with markers (four different colours) and flip-chart-paper; each table addresses a certain topic; three questions have to be answered per table.

Instructions for participants: The participants have to be equally distributed amongst the four tables; the sub-groups are supposed to discuss the respective questions at that table; one person is nominated as “host of the table”; he or she will take the minutes and stay at the table during the whole process; after 20 minutes of discussions, the other participants change to another table; however it has to be assured that the sub-groups do not always comprise of the same people.

Instructions for the host of the table: The host stays at his or her table; when the second sub-group arrives, he or she first presents briefly the results of the previous group before re-starting the discussion; after four rounds (after each participant has been at each table) the host presents the overall results on the respective topic to the whole group.

Box 6: Memory map

The memory map process is a participatory reflection process to analyse the perception of a PA-development “through the eyes of the locals”. By using this technique, the very complex topic of perception can be made visible and can therefore be discussed in greater depth. In a relaxed atmosphere, participants are encouraged “to say what they really think”. The stakeholders are invited to come up with “incidences” in the past that were perceived positively or negatively. For instance, a public event, a project started, a public statement, or a personal experience that is connected to the planning or the management of the park, can be put on the table as a positive or negative example. The workshop’s participants jointly order the incidences (events) over time and indicate its emotional quality by assigning a position above (positive) or under (negative) a “neutrality line”. Some incidences may show up by many workshop participants (key incidences), some may show up in different connotation (conflicting incidences), and some may only be raised by single individuals. Participants experience their personal perception as being one element in the whole picture. This specific workshop setting therefore allows for a common understanding of the process as a first step of joint reflection (Jungmeier et al., 2010). The following pictures present a draft and a final (stylized) memory map of the development in the Nockberge national park (Austria) as a result of an intensive stakeholder workshop on the history of the park.



How to deal with conflicts?

Normally, when the idea of establishing a protected area is communicated for the first time in a certain region several conflicts arise (“wrinkle phase”, Figure 14). In fact, it would be “strange” if the idea of establishing a protected area would not lead to conflicts at all. However, if the proponents of the PA plans do not perceive conflicts or debates, it might be that not the full range of decisive stakeholders has been included in the process. Therefore, the lack of conflicts or debates might function as a “red flag” for proponents and planners.⁴

At first sight, these make the process quite difficult. However on the positive side, conflicts at least show that there is an interest in the topic. Communication processes make sure that the problems are not neglected but discussed in order to find common views of the situation and that a process of conflict resolution accepted by the highest possible number of stakeholders is implemented. Some recommendations that may help managing this difficult communication phase (Suske et al., 2007) include:

- Sufficient time to discuss and exchange ideas and opinions: It is generally better to take time and show respect by listening carefully and making a genuine effort to understand rather than rushing or trying to achieve fast solutions. This is especially important when participants are confused, angry or disappointed.
- Some viewpoints in conflicts seem to include only “yes” or “no” statements. It is therefore important to explore the underlying reasons for acceptance or refusal, and to collect information to understand the interests of supporters and/or opponents.
- Patience for long-term processes: Formulating opinions, collecting information and decision-making takes time, on the side of the stakeholders involved as well as on the side of the proponents and planners of a PA. It is therefore crucial to be “patient” since unresolved problems or conflicts may pop up at a later stage, and can even “destroy” solutions already achieved and agreed upon.

⁴ Protected areas can be considered a specific, multi-purpose use of land. As land is generally scarce, there might always be several options for using (e.g. developing) the land. Conflicts are therefore somehow “natural” since each single plot of land faces several alternatives of use.

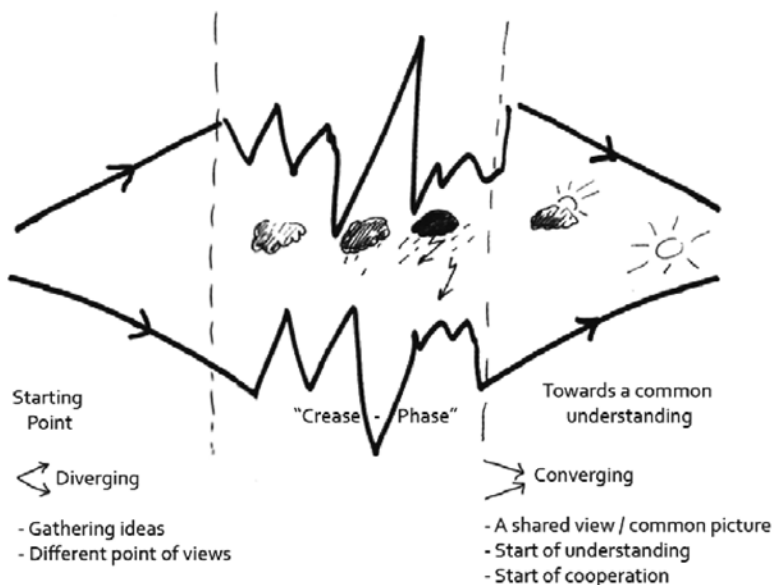


Figure 14: Solving conflicts in communication processes

Source: Suske et al. (2007, 35).

Communication within the life cycle of a protected area

Within the “life-cycle” of a protected area different pre-conditions prevail which means that different communication strategies have to be followed (Figure 15).

Pre-phase

During the early planning stages one needs to deal with a high degree of uncertainty, resulting from a general lack of information and trust which may also be the outcome of previous conflicts and local/regional problems. Spreading the idea of establishing a protected area in a region depends on the close cooperation with key stakeholders and opinion leaders, which have to be identified, informed and given the chance to become involved in the process. It is also crucial to define the key messages for each stakeholder group.

In this phase, the distribution of information has to be rather focused than widespread. The importance of personal meetings with selected opinion leaders cannot be overestimated.

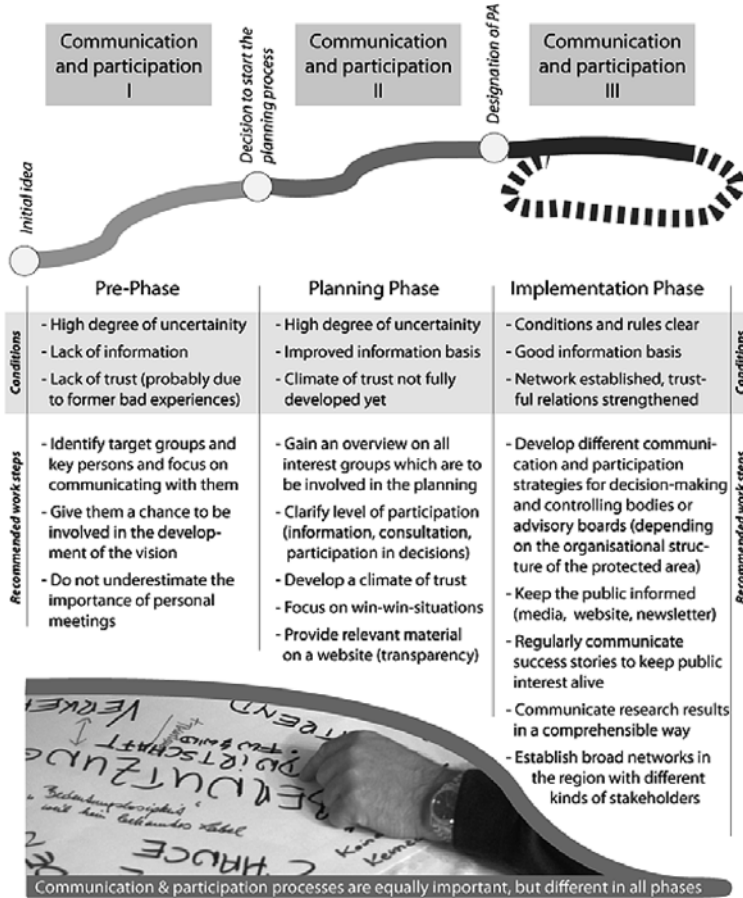


Figure 15: Communication and participation processes in the different phases of the establishment of a protected area

Planning phase

The establishment of a protected area is a (public policy) intervention in regional development and usually involves a wide range of different local and regional interests. Integrating these interests at an early stage in the planning process is not merely a question of successfully “promoting” the park. In fact, participatory planning allows for a better understanding of problems, and therefore for better, commonly accepted solutions. Nevertheless, the procedure has to be han-

dled in a focused way to avoid confusion. The main target groups in this phase are primary stakeholders such as land owners, farmers, hunters and foresters. It is vital for the quality and success of the planning process that informative, consulting, decisive, executive and controlling processes are clearly separated. The stakeholders' involvement in the planning phase is the initial point of a long-term cooperation in the management of a protected area and therefore has to be based upon a climate of trust.

Participative mechanisms are essential for planning a protected area, however, "too much" participation may also lead to an early end of the process.

Implementation phase

Stakeholder involvement does not end with the establishment of a protected area. The ongoing participation is clearly determined by the institutional setting of the park with a clear differentiation being made between decision-making, consultative and controlling bodies. Even in difficult situations decisions must be possible. Further to this it is the task of the management team to develop a partnership with a wide range of different interest groups, including secondary stakeholders such as hotel and restaurant owners, local entrepreneurs or environmental and cultural associations (NGOs). Besides the local networks, contacts should be established with research institutions and other protected areas on a national or international level by establishing individual partnerships or joining umbrella organisations such as ALPARC, EUROPARC Federation, or national federations of protected areas (see also chapter 0). In order to keep the public interest alive, regular media work and P.R. efforts (such as presenting "success stories") should accompany the daily work of a protected area.

2.5 Governance and decision-making

The concept of governance

Establishing and managing protected areas, and developing the region around these areas are important decisions that most often are taken by government bodies and public authorities, but also by NGOs and sometimes private organisations. The process how these decisions are made is usually called "governance". A recent definition of the concept of "governance" is the following:

"Governance is the process whereby societies or organizations make important decisions, determine whom they involve and how they render account. The term 'governance' is adaptable to both structured and unstructured settings. That is, it can relate to direction-setting in or-

ganisations (such as businesses, governments, non-profit entities) and in looser associations (partnerships, communities, alliances, international accords). [...] The process of governance - the taking of decisions and rendering of account – typically rests on a governance system or framework. The formal elements of this system (constitutions, bylaws, policies, conventions) define how the process is supposed to function in a particular setting. But in practice, the informal traditions, accepted practices, or unwritten codes of conduct that people follow are often equally important in determining how governance works.” (Plumtre, 2010, at www.iog.ca).

With reference to protected areas, Graham et al. (2003, 2-3) define governance as the

“interactions among structures, processes and traditions that determine how power is exercised, how decisions are taken, and how citizens or other stakeholders have their say. Fundamentally, it is about power, relationships and accountability: who has influence, who decides, and how decision-makers are held accountable.”

Governance was recognised as an important issue at the 5th IUCN World Parks Congress held in Durban in 2003. A series of workshops addressed the issue of governance in protected areas. In 2004, the Convention on Biological Diversity, at its 7th Conference of the Parties (COP), adopted a comprehensive protected area program of work which included as one of its four interlinked and mutually reinforced elements “Governance, participation, equity and benefit sharing”. All of these are indicators of the importance that is now being placed on the whole issue of governance in protected areas.

Governance in protected areas

It is important for PA managers that they have a clear concept and understanding of governance and are able to distinguish it from “management”. Whilst management addresses what is done about a given situation, governance addresses who makes those decisions and how these should be implemented. In the broader sense governance can be defined as a set of processes, customs, policies, laws, and institutions affecting the way in which a protected area is directed, administered or controlled. It is also concerned with the relationships between the many stakeholders and the goals for which the protected area is governed, and to ensure the responsibility and accountability of certain individuals in the organisation through mechanisms that try to reduce or eliminate inefficiencies.

The governance setting of a protected area will depend by and large on the formal mandates, institutions, processes and the relevant legal and customary

rights that apply to the particular protected area. There are many important governance decisions related to protected areas and two of these are related to the powers and responsibilities of the protected area, which include issues such as;

- determining where a protected area is needed,
- who is entitled to have a say in the protected area,
- creating rules about the land and resource uses,
- enforcing zoning rules,
- deciding how financial and other resources will be spent, and
- entering into agreements with other parties to share or delegate some of the above powers (Graham et al., 2003).

“Good governance” as an underlying management strategy may crucially influence whether the protected area can achieve its objectives, is able to fairly share benefits and costs, and has sufficient support by local communities and stakeholders. Good governance for protected areas depends very much on

- effective links between the PA management and administration, and the local and regional authorities and legislative bodies,
- effective decision-making and the support for such decisions,
- the implementation of an efficient management systems,
- strengthening communication processes between public, private and the civil sector, and
- the involvement of the private sector, NGOs, civil sector society partners and business partnerships.

Governance categories for protected areas

IUCN’s above-mentioned 5th World Park Congress discussed and refined a categorisation of governance models for protected areas. The ideals of governance in PAs consist of the following categories:

- Government protected areas, where government agencies at various levels make and enforce decisions;
- co-managed protected areas, where various actors together make and enforce decisions;
- private protected areas, where private landowners make and enforce decisions; and
- community conserved areas, where indigenous people make and enforce decisions.

The concrete model of the PA’s institutional and organisational setting can be different between and within these categories. For instance, government protected areas may be managed by staff employed directly in local or regional govern-

ments, or can also be organised in the form of a private limited company owned completely by the government.

The governance categories can also be combined with IUCN's management categories which do not prescribe a certain kind of ownership or management model (Lockwood et al., 2006).

In spite of the more recent growth in co-managed, private and community run protected areas most of the world's protected areas are still managed by governments in different organisational forms. This is especially due to the fact that most protected areas involve substantial public ownership of the land. Governance of protected areas by governmental agencies means that they are accountable to the public for effective management and wise use of public funds. Governance by governmental agencies is usually more centrally controlled and standardised (see on the diverse organisational issues in particular chapter 3.4.1).

At the same time there are concerns about the equity and fairness when private landowners establish their own protected areas. Managing such areas may neither involve participation in decision making by the state or local communities nor accountability to the government or the public at large. A governance advantage of these private protected areas is that they often allow for more innovation and operational effectiveness.

Governance in "Community Conservation Areas" has a number of advantages and disadvantages much of which is related to the collective nature of their perceived rights and to the complex nature of their governance system. The greatest disadvantage is that these communities may be required (as managers) to respond to the formal requirements of government. However, they may find this difficult to do, and it may indeed be difficult for them (i.e. their forms of representation may not fit the "normal" governance standard, their capacity may be limited, and their traditional principles and values may be at odds with the traditional ideals of conservation). On the other hand the advantages are that these communities' livelihoods and cultural identity are related to the natural resources of the protected area and as such its governance can be much more important.

Many protected area governance issues revolve around the balance of responsibility between protected area agencies and other actors with anything from full state control to full control by other actors (Lockwood et al., 2006). Nowadays there is a shift from full control in decision making to a more collaborative process in decision making, which in turn means that there is a lot more stakeholder involvement in the decision making process of protected areas (see chapter 2.4).

Protected areas governance principles

Graham et al. (2003) have outlined the main governance principles for protected areas (see also Lockwood et al., 2006; Worboys et al., 2005). These are:

- *Legitimacy and voice*
 - Existence of a supportive democratic and human rights context.
 - Appropriate degree of decentralization in decision-making for PAs.
 - Collaborative management in decision-making for PAs.
 - Citizen participation occurring at all levels of decision-making related to PAs.
 - Existence of civil society groups and an independent media.
 - High levels of trust.
- *Direction*
 - Consistency with international direction relevant to PAs.
 - Existence of legislative direction (formal or traditional law).
 - For national PA systems, existence of system-wide plans.
 - Existence of management plans for individual PAs.
 - Demonstration of effective leadership.
- *Performance*
 - Cost effectiveness.
 - Capacity to undertake required functions.
 - Co-ordination – ability and capacity to coordination.
 - Performance information to the public.
 - Responsiveness in dealing with complaints and public criticism.
 - Monitoring and evaluation.
 - Adaptive management.
 - Risk management.
- *Accountability*
 - Clarity in the assignment of responsibilities.
 - Coherence and breadth.
 - Role of political leaders.
 - Public institutions of accountability.
 - Civil society and the media.
 - Transparency.
- *Fairness*
 - Existence of a supportive judicial context characterized by respect for the rule of law.
 - Fair, impartial and effective enforcement of any PA rules.
 - Fairness in the process for establishing new PAs.
 - Fairness in the management of PAs.

3 FIELDS OF ACTIVITY IN PA MANAGEMENT: STAKEHOLDERS AND REGIONAL DEVELOPMENT

3.1 First steps in establishing a Protected Area

3.1.1 Development of idea and vision

Taking the initial idea to a common vision

In the past, the development of many protected areas was initiated in order to prevent developments negative from a conservation viewpoint, for example, transport infrastructure, large scale tourist projects, or the construction of a power plant. Nowadays, protected areas are increasingly established before a more anticipatory and less “defensive” background with the driving forces being conservation, science, recreation, information and education, and sometimes economic considerations (income and livelihood for local residents). As a result, the designation of protected areas has become a more active and creative process with a focus towards sound, recognised management policies and practices. These management practices include transparency and participation. Many different stakeholders have to be involved in accepting and developing the idea of a protected area and extending it to the formation of an overall vision on how to preserve and sustainably use the area.

According to IUCN (Thomas and Middleton, 2003), the vision for a protected area should

- describe the kind of protected area that should be achieved in the long term. This will help people to understand what is hoped for the area for now and in the future, as well as the reasons of and the action needed to reach the vision;
- be a long-term statement which is unlikely to change significantly over time. It should therefore provide continuity; and
- include environmental, recreational, cultural and social, and economic aspects of the protected area.

A vision therefore defines the desired or intended future long-term state of a specific protected area in terms of its fundamental objectives or strategic goals.

“Visions are no utopian reveries. They rather stand for another option besides the reality we are living in and are nutrients on the way towards achieving certain goals” (Kluge, 2009). Designing a vision for establishing a PA in a region often presupposes that people leave their “normal” way of thinking (out of the box) and that they use their imagination towards new ground (for example the idea of establishing a protected area). Opinion-leaders, who devoutly believe in their ideas often facilitate and stimulate involvement of other different stakeholders towards developing a commonly agreed vision.

Generally, the development of a vision is connected with imagination and emotions, or, as Naess (2002) puts it, “feelings and emotions are the source for our ideas, inspiration, and creativity”. “There can be no transforming of darkness into light and of apathy into movement without emotion” (Jung, 1938). “If you want to build a boat, do not round up men to find wood, prepare tools and distribute tasks and jobs, but teach the men longing for the vast and endless sea” (Saint-Exupéry, 2000; translation by the authors).

The results of such a vision development process should be written down and made visible for internal (e.g. inclusion in the management plans) and external use (e.g. public information material).

During the development process the issue of legal frameworks of the establishment of the area as a protected area has to be clarified. As no protected area is likely to be established in a region without existing binding regulations (e.g. spatial planning legislation, national or European nature protection legislation or requirements of international conventions), it has to be communicated that the vision can only be developed with due consideration to these legal frameworks.

Once the broader vision and objectives have been agreed these may be summarises a vision statement (Figure 16). A well designed vision statement should answer the question of what needs to be achieved by the protected area in not more than two or three sentences. It should be clear and unambiguous, be worded in a memorable and inspiring fashion, be realistic and aligned to the protected areas culture and values.

The vision and the vision statement should be a source of inspiration that provides clear decision making criteria on how to establish and implement the protected area (for examples, see Box 7).

Box 7: Examples of vision statements for protected areas and international business

Plitvice Lakes National Park, Croatia (Šikić, 2007): *Plitvice Lakes National Park shall remain a UNESCO World Heritage site, and a national leader in the conservation and promotion of unique natural and cultural resources in their valorisation by means of sustainable tourism to the benefit of the region and local communities and to the satisfaction of visitors.*

uKhahlamba Drakensberg Park World Heritage Site, South Africa (Duncan et al. 2005): *A consolidated and extended Transfrontier Park that is secured, protected, representative of the biodiversity and cultural values of the mountain grassland landscape, which is supported by the people of southern Africa, and contributes significantly to the economic development of the region through eco-cultural tourism as well as providing sustained and tangible benefits to people.*

MalaMala Private Game Reserve in South Africa: *Our vision is the strict preservation of the bush with the object of handing this on as a legacy to our younger generations.*

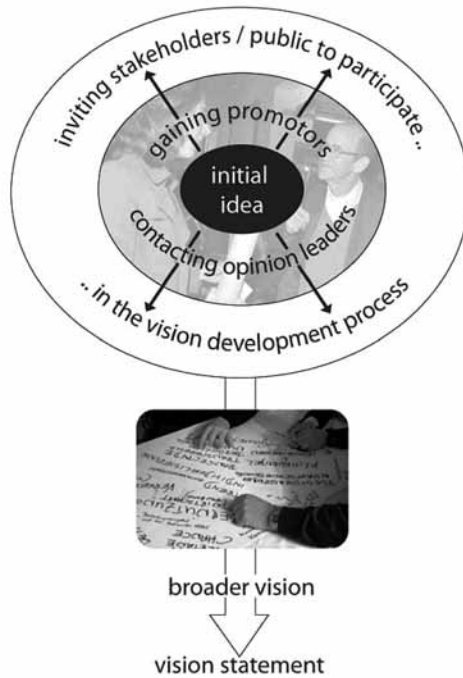


Figure 16: From the initial idea towards a common vision for the creation of a protected area in a region.

Spreading the idea – gaining supporters

Once an idea is born, it has to grow in order to increase the chances of its future implementation. Early scepticism or even resistance may be met with some kind of “thinking out of the box”. Devoted opinion-leaders and local/regional decision-makers as promoters of the initial idea will be of tremendous support, especially with the stimulation of discussion and the promotion of the idea in the region (Vicari, 2009).

In the phase of spreading the idea it is critical and vitally important to gather the latent, unarticulated ideas and concerns of the stakeholders involved. Creativity is needed for stimulating the relevant (interest) groups to participate in this early process of developing the idea and vision.

Experience shows that the exclusion of stakeholders leads to opposition and resistance against the idea of establishing a protected area in their neighbourhood. As such, stakeholder involvement should not be underestimated.

Chances and limits of stakeholder involvement

The benefits of getting stakeholders to participate in the development of the vision are the increased probability that stakeholders are more likely to support the concept of a protected area. Rumours that a protected area might be established in a region without clear information and lack of participation quite often result in opposition as people may have fears regarding a one-sided focus on nature protection and may feel that their issues are being neglected or not taken into account. Given the chance to participate in the development of common goals for their own region, they are less likely to resist from the beginning. By involving stakeholders at an early stage they are also more likely to support, and in some cases get actively involved, in future processes with regards to the development and management of the protected area.

One of the biggest challenges with regards to participation is that the process and finalisation of a common vision could be hampered by the number of participants, their knowledge, past experiences or prejudices. All of these can make it very difficult in achieving to a common agreement.

How to stimulate a lively process?

Questions such as

- how to proceed, once the idea of establishing a protected area arises in a region?, and
- how should people be addressed and who should be invited to participate in the process?,

cannot be easily answered as these have to be decided according to the respective conditions in the region.

In smaller areas it might be a good idea to personally meet relevant local decision-makers and gain their support by explaining potential benefits and opportunities, but also problems and threats, of establishing a protected area. Once a group of promoters has accepted and wants to be involved, then more stakeholders can be invited to workshops in which common goals can be developed. The invitation should be announced in the local media and/or at popular meeting places (such as churches or local community halls) so as to make it open for everybody. A decision to invite pre-selected stakeholders might have to be justified as people can easily feel excluded and may therefore resist the project from the beginning.

“Don’t invite people to develop a common vision for the establishment of a protected area as only a few people may show up. Relate the topic of the meeting to their daily concerns. Invite them for example to a workshop on how to make their lives more worth-while for the future.” (Reutz, 2009).

In larger areas open invitations might not be feasible due to the potentially high number of concerned stakeholders. In such cases, representatives of all relevant stakeholder groups should be invited, especially if resistance may be expected. “Future workshops” are an appropriate method of dealing with larger groups of stakeholders. The process should be accompanied by media work to keep the local population up-to-date. The final results of such a vision development process should be made available to the public to ensure transparency from the very beginning.

Vision development workshops should in general be professionally moderated. So-called “champions”, opinion-leaders accepted by most of local residents, should be invited to stimulate and inspire people to paint a “bright and creative” picture of the future, instead of sticking to perceived obstacles. The outcome of such a process should not be the lowest common denominator, but a reasonable mixture of visionary but still feasible goals to which stakeholders can commit to.

The following working steps can be considered a “best-practice” vision development process:

- Development of the idea to establish a protected area in a certain region;
- Formation of early partnerships and identifying key stakeholders as promoters;
- Invitation to stakeholders to discuss a common vision for the development of the region; thereby explaining the advantages, possibilities and chances of success for a protected area;
- Consideration of various creative ways of overcoming obstacles to the protected area;
- Establishment and definition of the core goals for the protected area and outlining the vision for the area; and
- Summary of the broader vision in a vision statement.

Best practice and tools

Techniques in developing the vision could include brainstorming sessions, information events, moderated workshops, or future workshops.

Vision development in the Biosphere Reserve Great Walsertal took place in different phases: In 1999, almost seventy residents accepted an open invitation to jointly determine some general principles for the future development of their valley. The idea was “to make life more worthwhile” and “economic activities

more efficient” by creating a biosphere reserve in the valley. Guided by two external moderators stakeholders agreed on common goals to be achieved within the next five years for several topics, such as nature conservation, tourism development, transport and mobility, as well as cultural and social aspects. By actively involving the local people in the development of a broader vision for the valley, important opinion leaders were persuaded that a biosphere reserve would be an appropriate tool to conserve nature and improve the quality of life in the valley. The results of the vision development process were published and made accessible to all interested parties. The completion of the vision was then celebrated together with the local population. This celebration underlined the start of something new in the region, the beginning of the process to establish a biosphere reserve.

Regional development

In the past, the issue of regional development has been somewhat neglected in the process of establishing an idea and vision for protected areas. This situation has now changed as (financial) resources for PAs become scarce, and the issue of regional economic development and regional growth starts to impact on the planning of protected areas.

As the issues of regional development and nature conservation are often considered complementary, participatory approaches mean that the vision discussed for a protected area may appear to be contradictory, with a focus on regional development by some stakeholders, while others place more emphasis on the conservation of nature. This means that the involvement of stakeholders as far as regional development is concerned becomes a much more important and complex task.

The reality is that regional development is an integral part of the development and planning of a vision for a protected area (as can be seen in the above-mentioned example of the Great Walsertal) and cannot be underestimated. This is particularly prevalent in underdeveloped regions where the local population require resources for their very livelihood. And as these resources (timber, grazing, hunting etc.) are depleted in the area where they live there is a greater tendency to take these resources from the neighbouring protected area. In addition, the vision of a PA cannot be sustainable if it is in complete contrast to the regional development strategy insofar as, for regional development, both have to complement each other, such that credible and enforced nature conservation is considered a crucial prerequisite for further development. Otherwise, a PA vision and the regional development strategy might both be weakened in terms of credibility and potential for improving both biodiversity and the living conditions of residents.

3.1.2 Feasibility check

The establishment of a protected area can be seen as a long-term commitment in a region. An early pre-check on the feasibility of a selected protected area category is needed to avoid wasting energy and resources resulting from quick or ill-informed decisions. Feasibility studies compare different options, identify chances and potential synergies and outline the preconditions for success. Likewise, such assessments focus on possible conflicts, constraints, contradictions and obstacles which may prevent the effective implementation of a protected area. Risks and threats need to be recognised at a very early stage. In general, feasibility checks answer the question of whether or not the intended protected area category is generally applicable to the regional situation and provide sound technical reasons as a sound basis for further decision-making.

Feasibility studies as part of the decision-making process

Before protected areas are nominated, the development of a vision is formulated in the majority of cases (see chapter 3.1.1), and a specific protected area category (which seems to be appropriate to achieve the goals) is provisionally chosen. After these steps, a feasibility study may be commissioned to prevent a region from taking “unreasonable” decisions which might have to be revised later. Ideally neutral consultants will be involved to qualify the subjective internal view with an objective external one (Figure 17). The acceptance of a potential protected area may be facilitated by adequately communicating the technically qualified results of such a feasibility study amongst the relevant stakeholders. It is therefore important to focus not only on ecological aspects but equally on the potential social and economic costs and benefits of the chosen protected area category. Once the feasibility check points to a “Yes-go-for-it” and the acceptance in the major stakeholder groups is secured, the next steps towards the nomination of the protected area can be initiated (see Box 8).

Some guiding questions may help to accompany this pre-planning phase especially when drafting a feasibility study (cf. Strith, 2007):

- Are there preferences, and is there a demand for the establishment of a protected area?
- What kind of protected area might be established?
- Are there more pressing problems in the region?
- What are the benefits, and to whom will they accrue?
- What are the costs, and who will bear these?
- What may facilitate, what may prevent the success?
- What are the next steps, and are there sufficient resources available?

- What pre-assumptions are in the minds of proponents, planners and stakeholders?

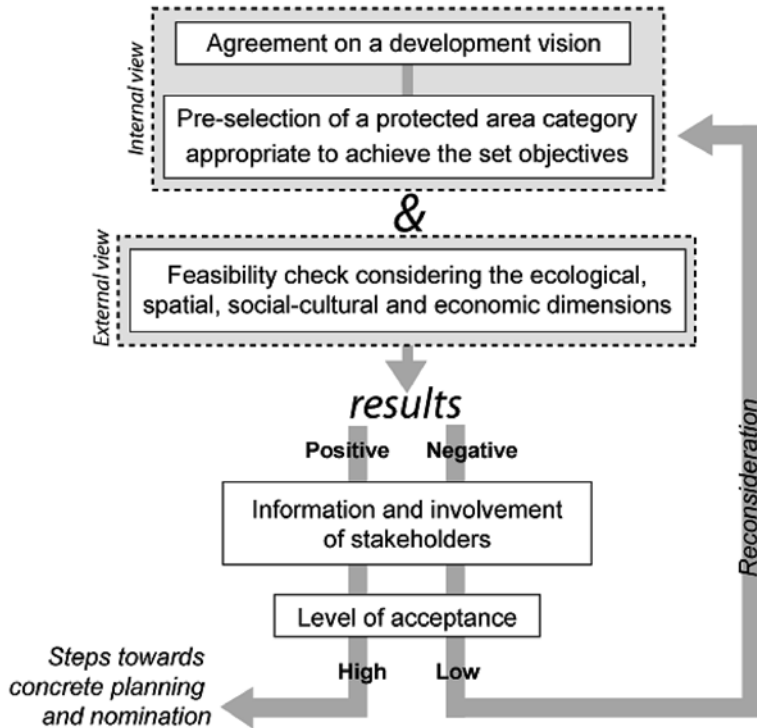


Figure 17: Decision-making process in favour of the establishment of a specific protected area category

Box 8: The meaning of feasibility checks: Two examples from Austria

During the *Vienna Woods* millennium celebrations in 2002, the members of the “Planning Unit East” (composed of the Federal States of Burgenland, Lower Austria and Vienna) formulated objectives aiming at the preservation and sustainable development of the ecologically valuable forest ecosystem in Eastern Austria (Lange 2005). Two protected area categories were considered potentially appropriate for the Vienna Woods: a national park or a biosphere reserve. A commissioned feasibility study (ARGE Wienerwald 2002) clearly indicated that the UNESCO concept of biosphere reserves is more qualified to achieve the development goals than a national park. Three years later, the Biosphere Reserve Vienna Woods was inaugurated.

At the beginning of the 1970s the mountain region known as the “*Nockberge*” was threatened by an intensive touristy development. First concrete actions in 1980 generated massive protests by conservationists resulting in a public referendum. 94 per cent were against the construction of large ski resorts. Seven years later the Nockberge National Park was nominated in order to prevent the region from future infrastructure projects – without verifying if this protected area category is appropriate or not. Later on, an IUCN evaluation came to the conclusion that the region does not – and probably never will be able to – fulfil the requirements of a national park. A transformation into a biosphere reserve was recommended which, since 2006, has been addressed but is difficult to perform. It is obvious that once decisions are taken, they can only be changed at high cost.

Different aspects of feasibility checks

Considerations related to the establishment of a protected area sometimes tend to be one-sided and often focus only on ecology. Commonly, one of the main questions is the availability of sufficient areas for the designation of core zones. However, there are many more aspects which have to be considered when feasibility checks are carried out:

Ecological, geographical and spatial aspects: Are the natural features and land use forms compatible with the chosen protected areas category?

Socio-cultural aspects: What is the impact on the livelihoods of the local community and is the chosen protected area category accepted by the major stakeholder groups?

Economy: Do the expected benefits exceed the related costs and does the project have higher priority than other ones using the same resources? How may the costs and benefits be distributed among stakeholder groups?

Law and legal frameworks: Do the regional/national laws and regulations support the envisioned protected area category?

Technical/organisational aspects: Is there enough support and openness for changes during the processes, and do the required methodologies and technologies exist to successfully implement a protected area?

Time: How much time is available and needed to establish the protected area?

Techniques for feasibility studies

There are several methods and techniques which may be used to assess the feasibility of a protected area category; Table 2 presents an overview of methods.

Table 2: Techniques and methods for feasibility studies

<i>Kind of measure:</i>	<i>Efforts:</i>		
	<i>Low</i>	<i>Medium</i>	<i>High</i>
<i>Quantitative</i>	Identification of natural values	Logical framework	Ex-ante evaluation (EC, 2001)
<i>Qualitative</i>	SWOT analysis	Force field analysis	Stakeholder analysis (see chapter 2.4)
<i>Monetary</i>	Available budget	Cost benefit analysis (EC, 2008)	Cost effectiveness / Least cost analysis

Source: Stritih (2007).

Techniques in grey boxes are explained in the main text.

Logical Framework Approach

The Logical Framework Approach was developed in 1969 for the United States Agency for International Development (USAID); today it is widely used by multi-lateral donor organizations like GTZ or UNDP. It helps planners to analyse the situation in the pre-planning phase and to assess potential risks (AusAID, 2005). The most important component is the 4x4 Logical Framework Matrix (Figure 18). The boxes of the matrix ideally need to be filled in the order of the numbers given in the grey arrows: beginning with objectives and results, followed by pre-assumptions, then indicators and means of verification for objectives and results. Finally, the activity row needs to be dealt with to make sure that the objectives, not the activities lead the project.

Intervention logic	Verifiable Indicators	Means of verification	Assumptions & Risks
1 Overall broader objective	8 Indicators related to broader objective	11 sources of information	
2 Specific objectives	9 Indicators for specific objectives	12 sources of information	7 Pre-assumptions / external factors
3 Expected results / outputs?	10 Indicators for outputs	13 sources of information	6 Pre-assumptions / external factors
Key activities	Required means to carry out activities	sources of information	5 Pre-assumptions / external factors
14 ← 15 → 16			4 Pre-conditions and external factors outside your control

Figure 18: General structure and content of a Logical Framework Matrix

Source: Authors’ draft based on a logical framework presented by the European Commission (ec.europa.eu/europeaid; suggestions for sequence of filling derived from Equal, 2005, 26).

SWOT Analysis

A SWOT analysis balances the strengths (S), weaknesses (W), opportunities (O) and threats (T) of a planned project (Table 3). Usually, it is carried out by stakeholder groups who collect information and present their assessment on a broad range of topics. However it should be kept in mind that if more than five issues are mentioned per box, the analysis is of little use. It is necessary to summarise and prioritise. Beyond that a strong focus on the opportunities (and not on the weaknesses) is recommended.

Table 3: Matrix of a SWOT analysis

		Internal influence	
		Strength	Weaknesses
External influence	Opportunities		
	Threats		

Force Field Analysis

Force field analysis identifies all driving and restraining forces which potentially influence the project (Figure 19). Once the analysis is carried out, ways to strengthen the driving and to weaken the restraining forces have to be found. If the negative forces are considered too strong, it might be advisable to terminate the project development process.

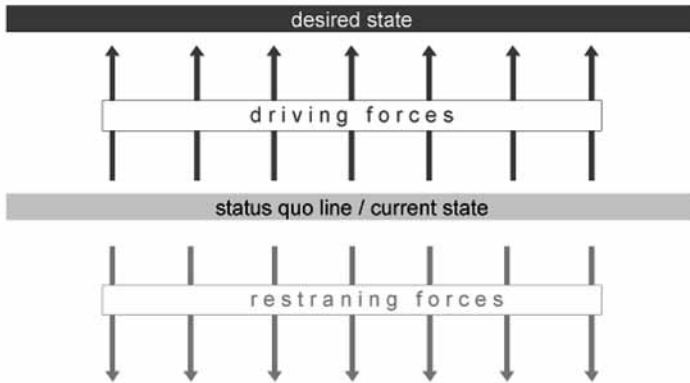


Figure 19: Force field analysis

Cost-benefit / cost-effectiveness analysis

Carrying out a cost-benefit-analysis may help to convince authorities to invest in the proposed protected area. Usually, the benefits of establishing a protected area are compared to the associated costs. Benefits are usually much more difficult to value in money terms. However, currently a lot of efforts are put into place to establish the monetary benefits of protected areas (e.g. TEEB, 2008). General guidelines to carry out cost-benefit-analysis are provided, for instance, by the European Commission (2008).

If projects with a given output level (target) are evaluated, cost-effectiveness is an appropriate tool for valuation. Planners and managers may then minimise the costs for achieving the targets, or, alternatively, for a given cost, maximises the output levels (European Commission, 2008). They may for example deal with the question of how much biodiversity can be preserved per unit area in alternative protected areas. Or inquire if it is cheaper to invest in avalanche forests than to build control structures on steep slopes near roads or settlements.

Cost-benefit as well as cost-effectiveness analyses rest on a number of assumptions, and include strict methodological frameworks regarding quantifying, valu-

ing and computing net-benefits over time (discounting). The valuation of non-market goods such as ecosystem services is in particular sensitive and complicated. Especially with these economic methods, it is strongly advised that economists with a broad range of experience in these methods are commissioned with the respective studies. Otherwise, results of weak analysis cannot function as a proper foundation for decision-making.

Cooperation with stakeholders in feasibility studies

In general, feasibility studies should be commissioned to independent experts and planners in order to ensure that the evaluation is solely based on technical arguments, and not distorted by personal preferences and emotions of stakeholders. However, this does not imply that stakeholders should not be involved in such a process which include – depending on the methods chosen – participatory and consulting working steps. As an example, Table 4 shows the involvement of stakeholders in a feasibility study.

Table 4: Stakeholder involvement in the different phases of a feasibility study

<i>Identification of values</i>	Exchange with local scientists, experts, NGOs or people who live for a long time in the region and may report of changes.
<i>SWOT analysis</i>	Ideally carried out in a workshop setting with different stakeholder groups; in the end, however, the results have to be condensed to some very important issues.
<i>Force field analysis</i>	Cooperation with key stakeholders to analyse the most important driving or rather restraining forces.
<i>Available budget</i>	Contact with relevant authorities who have to approve the budget for a planned protected area.

Once the feasibility study is finalised, the results have to be communicated to the interest groups in an appropriate way (target group oriented). Some recommendations for communication during and after the feasibility study include:

- Highlight the conclusions of the feasibility study (“PA is/is not feasible under certain conditions.”);
- Condense the important aspects in clear graphs;
- Draw a “rough and ready” spatial picture of the future protected area;
- Clearly differentiate between facts and opinions;
- Make sure that the results are transparent for all stakeholder groups.

3.1.3 Incorporation into Protected Area systems

During the 20th century, the number of protected areas has grown dramatically (see Figure 1 in chapter 2.1). “Although the growth in number and size of protected areas is spectacular, protected area systems do neither come near to representing the long-term needs of species, ecosystems, and the people who depend on them, nor fulfilling global biodiversity commitments” (www.protectedareas.info). One explanation may be that protected areas are often designated in areas which, due to their climate, soils or remoteness are of little human (economic) use (e.g. deserts or mountainous regions), instead of being created in priority areas for biodiversity conservation (Plieninger and Bens, 2008) – a fact referred to as “rocks and ice syndrome” (Terborgh, 1999, 97).

However, in order to maximise their effectiveness for biodiversity conservation, protected areas need to be developed from a broader perspective, taking into account synergies and interferences with other sites in and outside the (inter-)national networks of protected areas. As a consequence, the designation of protected areas should be planned strategically. Biodiversity hotspots and gaps in conservation have to be identified, prioritised, and closed.

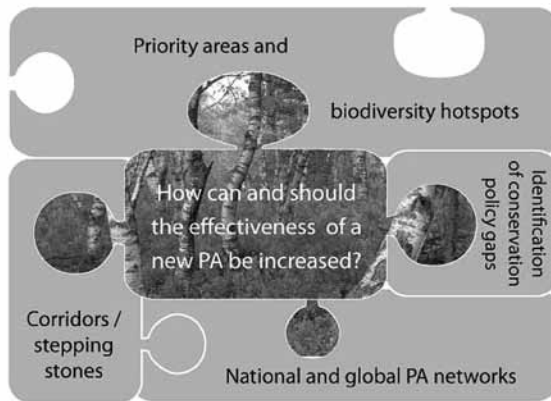


Figure 20: Protected areas as key elements in broader efforts for conservation

Increasing effectiveness of PAs

As a result of European policies (e.g. structural funds such as Interreg and LIFE projects) and increasingly de-centralised planning approaches, many protected areas in Europe have been predominantly planned at the regional level. New sites

should therefore be developed with due consideration to existing protected area systems and current policy priorities for biodiversity conservation. The aim is thus to make the individual protected area one component of a bigger puzzle (e.g. as part of a PA network), and one key player in a broader effort for conservation (Figure 20).

Approaches for increasing effectiveness

Defining priority regions

Over the last decade, international conservation organisations made an effort to determine broad scale priority areas for conservation; these include:

- 218 “Endemic Bird Areas” (Stattersfield, 1998), identified by BirdLife International; in these regions the distribution of two or more restricted-range bird species have to overlap (Olson and Dienerstein, 2002); examples from Europe include Madeira and the Canary Islands or Cyprus;
- 238 “Global 200 Ecoregions”, identified by WWF International, comprising 142 terrestrial, 53 freshwater, and 43 marine ecoregions. Relevant aspects for being chosen as ecoregion comprise species richness, endemic species, unusual higher taxa, unusual ecological or evolutionary phenomena, and the global rarity of habitats (Olson and Dienerstein, 2002); examples from Europe include the Mediterranean Forests, Woodlands and Scrub and the Caucasus-Anatolian-Hyrcanian Temperate Forests;
- 34 “Biodiversity Hotspots”, identified by Conservation International: Each hotspot is extremely rich in species, but also highly threatened. It has to host at least 1,500 endemic species of vascular plants, while having already lost at least 70 per cent of its original habitat (Mittermeier et al. 2005, Myers et al. 2000); examples from Europe include the “Irano-Anatolian” or the “Mountains of Central Asia” Hotspot.

Some areas in Europe, like the Caucasus, have been identified as high priority area for conservation by all three institutions, pointing out that in this case action has to be taken urgently.

As important as these large-scale approaches are for setting priorities in nature conservation, they do not exactly define which sites should be protected at a local scale. As a consequence, small sites which may be globally important for biodiversity are not captured (Eken et al., 2000). Instead, gap analyses may be used to identify the need for further protection on the national level.

GAP analysis

The Convention on Biological Diversity’s (CBD) Programme of Work on Protected Areas (PoWPA) called upon signatory states to identify gaps in their existing protected area network by 2006 (Action 1.1.5) in order to ensure that all native

species and ecosystems are represented in protected areas of sufficient size, number and distribution. A guide has been produced in order to facilitate the implementation of gap analysis for a nation's system of protected areas (www.protectedareas.info). All such analyses should follow the same basic steps outlined in Fig. 25. Once the general areas in need of protection are identified, determining which gaps to tackle first is inevitably influenced by social and political factors (Dudley and Courrau, 2008).

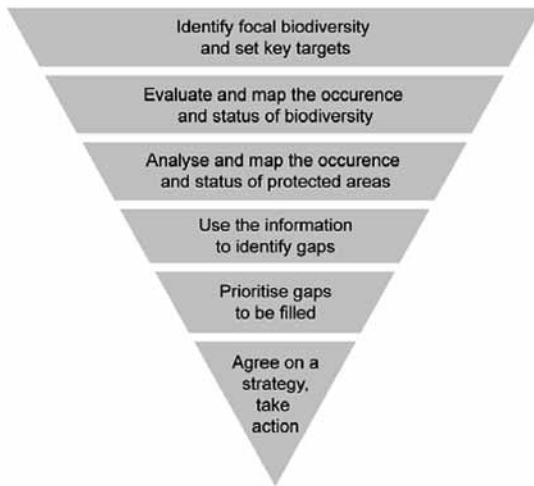


Figure 21: Basic steps for identifying gaps in protected areas' systems

Source: www.protectedareas.info

Linking protected areas with corridors

In order to improve their effectiveness and to prepare PAs for potential future threats (e.g. climate change), protected areas should be connected to each other. Ideally, they should expand from islands to ecological corridors providing stepping stones for migrating species. By making an analogy between reserves and islands, Diamond (1975) advised against the isolation of protected areas; they should rather be arranged in close clusters or connected with corridors (Figure 22). This means that for instance migration barriers are removed or bridged (Figure 23), or that integrated land use measures (e.g. extensive agriculture) allow for the survival of species in between the protected areas.













Better ..		Worse
	large PAs then small ones	
	one large PA than several small PAs of equal total area	
	in case of multiple small PAs, they should be close to each other	
	small PAs arranged in clusters instead of linear fashion	
	establish connections between PAs with corridors	
	PAs should be as circular as possible	

Figure 22: Schematic representation of the design principles for protected areas (PAs)

Source. Authors' draft based on Diamond (1975).



Figure 23: Connecting forest ecosystems in Hoge Kempen National Park (Belgium) by bridging the main road

Incorporating protected areas into existing networks

Any intended new site should be developed with a broader vision, as part of a national or international network. An overview of the existing protected areas in the country or region needs to be gained in order to be able to consider categories, ecosystems or approaches which still have comparatively low representation. In this way, the attributes making the projected site unique may be identified. It can be shown, how the intended core functions of the new site (e.g. protection of certain species or habitats, research or regional development opportunities, educational offers) bridge gaps in the existing protected area system.

On the international level, the European Natura 2000 network or UNESCO's list of World Heritage Sites are amongst the superior systems which may (have to) be considered.

The *Natura 2000 Network* aims at assuring the long-term survival of Europe's most valuable and threatened species and habitats. EU Member States are obliged to designate Natura 2000 sites based on the occurrence of certain species or habitats (in the nine distinguished bio-geographical regions) that are listed in the annexes of the Habitats or Birds Directive. That is, the nomination of a Natura 2000 site is solely based on scientific criteria. In July 2009, the network comprised almost 25,000 sites, covering around 17 per cent of EU territory (ec.europa.eu/environment/nature/natura2000). The network therefore forms the biggest ecological network in the world. While the Macaronesian region (Azores, Madeira and the Canary Islands) is already fully covered, additional Natura 2000 sites are needed in the Pannonian or Continental region (ec.europa.eu/environment/nature/natura2000/barometer).

UNESCO's World Heritage Sites represent unique places which are of outstanding value to humanity not only to one country. At least one out of ten selection criteria have to be met to be included on the World Heritage List. In 1994, the World Heritage Committee realised that the list lacked balance. Cultural sites by far outnumbered natural ones, and a majority of sites was located in developed regions, notably in Europe. A Global Strategy was launched to encourage the designation of new natural sites and sites located in developing countries (UNESCO, 2008).

Figure 24 shows how a national park can be embedded in a diverse system of relations to other protected areas and international networks.

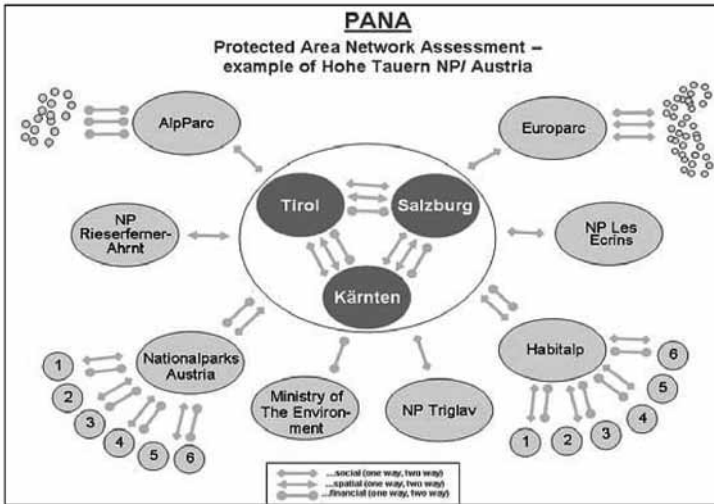


Figure 24: Network and embeddings of Hohe Tauern national park

Source: Jungmeier et al. (2008).

Stakeholder involvement in PA networks

Whenever protected areas are developed at the regional level, for instance, by decentralised planning, usually a broad range of stakeholder groups (e.g. land owners, farmers, hunters, tourism associations etc.) is involved. However, strategically planning where and which type of protected area should be designated in order to maximise conservation effectiveness or to fulfil international obligations (e.g. EU Directives), expert opinions (scientists, NGOs etc.) are primarily sought after to be able to define biodiversity hotspots and identify national gaps or needs for establishing corridors between existing networks. Decisions about the inclusion of an area in the Natura 2000 network are also solely based on scientific criteria, not by stakeholder consultation.⁵

But once the conservation priorities or obligations are clear, the rationale for favouring a specific site as a potential new protected area has to be communicated quite broadly and at an early state. In case of the Natura 2000 network, communication often failed. Citizens in many European countries felt ignored by policy-

⁵ However, in conservation practice, the influence of stakeholders may become apparent also in reducing effectiveness (political economy of public conservation decisions; cf. e.g. Ando and Getzner, 2006).

makers when literally over night their land was designated as a Natura 2000 site. By informing stakeholders about the potential consequences for their every day (work) lives, it can be avoided that the approach of defining conservation priority areas is opposed from the beginning. The scientific facts may be used to generate pride of having something special or unique in the region which is worth being protected. Strategies on how to achieve the preservation of these assets should be developed jointly with all stakeholders concerned. Quite recently, comprehensive guidelines on how to involve stakeholders in the implementation of ecological networks have been developed by the European Centre for Nature Conservation (ECNC 2009).

Impact on regional development

Identifying priority areas for conservation or developing ecological corridors clearly influences regional development. In Spain, for instance, the decision on establishing an ecological network in the Navarra region was integrated in the subregional spatial plans, with it making its implementation an obligation for planners in the region (www.ecologicalnetworks.eu). In another example from Germany, the fresh water supply for the metropolitan area of Munich is drawn from the Mangfall Valley which was declared a priority area for conservation in order to ensure a high quality of the drinking water. The city of Munich continues to buy out land in the valley which is leased to farmers who are obliged to adopt organic farming practices. In that way and in the course of the time, the largest coherent area of organically cultivated land in Germany was generated (Grüne Liga, 2007).

With a network of PAs including corridors, a region might more credibly market itself as a “green region” in order to attract visitors – a strategy that often leads to improved regional development.

3.2 Basic planning

3.2.1 The use of planning handbooks

The decision to establish a certain type of protected area in a region marks the start of a complex task – the planning process. During this procedure various sectoral needs have to be integrated and a wide range of different interests and legal requirements has to be considered. Hence, crucial issues can easily be forgotten or mixed up. Drafting a “planning handbook” and determining such a “road map” can provide helpful orientation for an effective planning, as it

- introduces steering and controlling mechanisms and ensures that the agreed procedures will be followed and none of the important aspects will be neglected;
- makes the planning process transparent and open to debate (and therefore prevents conflicts due to unclear procedures);
- helps to define objectives, methodologies, outputs and technical standards for documentation which guarantees an easy synthesis of individual results; and finally
- helps to estimate the required personnel, financial, and temporal resources.

Important issues in a planning handbook

A planning handbook is not a binding document. It just assists the smooth and effective implementation of the subsequent planning process. A common definition of such a document is: A planning handbook or manual describes and determines the aspects which have to be covered, and the steps which have to be taken in the planning process, including the required time frame and resources.

Thus, planning handbooks describe and determine the following aspects of the planning process (Jungmeier et al., 2001):

- Who will be involved in the planning team?
- Which are the regional specifics and key issues for the planning process?
- What has already been achieved? Which materials are already available (status quo)?
- Which working steps have to be realised (in which order and in which time frame)?
- Which technical aspects have to be considered (e.g. handling and storing of data, defining interfaces, application of project management tools)?
- Which kind of organisational structures shall be developed?
- Which rules shall be laid down for the whole planning process (e.g. communication principles, steering mechanisms, reporting procedures, corporate culture)?

In cases where certain decisions still have to be taken during the planning process, the handbook may delineate different crucial scenarios and related actions.

Structure of a planning handbook

The suggested planning process may be structured in distinguished work packages which are allocated to different planning phases (Figure 25). Amongst the important milestones are winding up the preparatory work, finalising the documentation of the status quo and completing the compilation of the results.

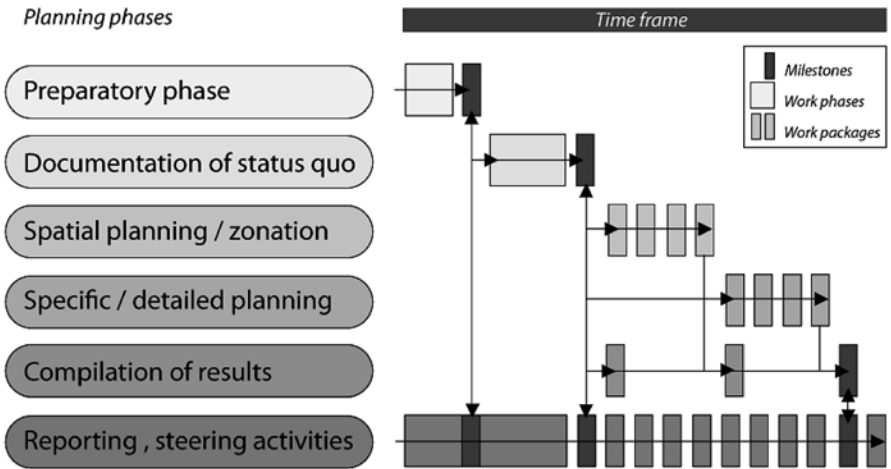


Figure 25: Overview on potential planning phases defined in a planning handbook

Source: Authors' draft based on Jungmeier et al. (2001).

In the *preparatory phase* the following questions have to be clarified; which stakeholders will be involved in the planning process (thereby clearly separate steering, operating and controlling bodies); who will participate in the basic planning team; which regional particularities have to be considered in the planning; which are the core concerns, which are less important aspects and which features are purely “cosmetic”; which management and conservation goals have to be achieved; and which technical tools are required for the documentation of the data (creation of a comprehensive record of technical standards in order to guarantee a proper synthesis).

In the *second phase (documentation of status quo)*, all materials and information (such as maps showing the topography, geology, water bodies, ecosystems or land use forms of the region, the documentation of the legal status) shall be compiled to be able to assess the status quo and define the remaining working steps.

The *third phase (spatial planning and zoning)* is dedicated to a reasonable and agreed-upon zoning of the planned protected area. By overlapping the maps showing the natural ecosystems or species diversity with those displaying the land use forms in the area, potential conflicts can be identified which have to be solved in the planning process. Compensation payments for not using areas in the core zones or reducing cultivated areas in the buffer zones have to be laid down and

negotiated in contracts (PES [payment for ecosystem services] schemes; contractual agreements, nature conservation contracts). Based on the results of such negotiation processes, management plans have to be developed for the different zones and land use forms (e.g. agriculture, forestry, tourism).

The *fourth phase (specific and detailed planning)* comprises among others research, monitoring and transport concepts, plans for visitor infrastructure or detailed species programmes. In this phase the new protected area also has to be embedded in the superior regional development requirements. All necessary steps have to be taken to prepare the legal establishment of the protected area.

In the *fifth phase (compilation of results)* all results of the previous phases are compiled. The final output comprises the delineation and zoning of the protected area, a management plan, and a draft law for the protected area.

Ongoing communication, reporting and steering activities are subsumed in the sixth phase. As the planning phase (after the feasibility study, see chapter 3.1.2) is the first effective contact of the newly protected area with its related stakeholders, the “culture” of communication and participation is of particular importance. A controlled and transparent exchange of information is only possible if the communication procedures are clearly defined. Who shall be informed at what stage of the planning process? Which are the important milestones?

Stakeholder involvement in the development of a planning handbook

Naturally, the modus operandi suggested in the handbook for the different planning phases has to be synchronised with the key players involved in the planning process (e.g. specialist departments of regional governments, land owners, external experts). At first, a rough draft of the suggested procedure shall be presented together with an overview on the existing materials and the required next steps (see second milestone in Figure 25). Subsequently, concrete work packages have to be outlined and discussed before finally determining the whole planning process.

Regional development

The planning handbook does not directly influence regional development but it serves as a road map for planning visitor infrastructure or transport and mobility concepts which have to be embedded in the regional development strategies and concepts. If the PA is considered a key element in regional development, the future management of the PA has to be directed towards supporting the regional development strategy within the limits of effective nature conservation policies. Vice versa, the regional development strategy has to account for the existence of

the PA. Therefore, a parallel drafting and defining of the planning and management handbook, as well as the regional strategy, is advisable.

3.2.2 Basic investigation

In most protected areas or sites to be established as a protected area, there already exists a wealth of information about individual regions or sites. However, the existing data has to be collected, standardised and codified. The task of basic investigation should provide all kind of data and information for the planning process (statistical data on economy, GIS, remote sensing data etc.). Existing data generally provides an adequate basis for the initial planning basis and may be complemented by additional research. Considering existing data prevents duplicating approaches and accordingly guarantees the input of reliable information. Collecting data and information involves using physical, biological, socio-economic or cultural environmental sources together with existing legislative frameworks, surveys and maps.

The objective of basic investigation is to build the basic knowledge for the first steps of establishing a protected area, such as drafting a mission statement the zoning plans. Questions in this working step include reasons for establishment, the location of the future PA, the natural and cultural assets, socio-economics of the region, and the land owners involved.

One of the most effective approaches to gain an overview of the region is to interview selected experts (with economic, ecological, and socio-cultural backgrounds). The following approach is recommended: (1) Definition of the form and content of the interviews and determination of the information needed (e.g. important features of the area, potential challenges and opportunities, existing published and undisclosed descriptions, materials, documents or projects); (2) careful choice of the interviewees (according to topic, experience, local knowledge, and availability); (3) interviews with the chosen stakeholders; and finally, (4) reflections on and review of the information received. At this stage of planning, regional knowledge tends to be of high value besides scientific, technical and nature conservation skills and experience. This method of picking up information is very fast and straightforward but it is important not to forget that it usually contains some level of subjectivity and personal interest.

In a second step, a comprehensive overview of the region should be provided. To start with, data that is already available can be used. Any primary data collection might be too expensive at this stage and should be considered only at a later date when the type and extent of information needed are exactly defined. All relevant existing data on the region should be searched, screened and aggregated. Therefore, three major sources of information can be distinguished: (1) literature,

(2) geographical and spatial data and (3) statistical data. As can be seen from this overview, mostly codified knowledge will be collected at this point; uncoded (tacit) knowledge might be of great importance at a later stage.

(1) *Literature*: any type of report, study, (regional) planning document, information on the legal framework (e.g. general information on the region, local and regional planning targets, infrastructure, volume of traffic, sustainable development plan, disaster prevention plan). Also all existing grey literature is important, as it usually provides very valuable information on the region.

Sometimes it is necessary or very useful to make an extensive literature research (e.g. in case of planning a protected area which is dedicated primarily to selected threatened species, or to selected endemic species). Using all available sources of information listed above and screening it thoroughly is highly recommended, as this task is the basis for a subsequent primary data collection and might therefore save resources at a later stage.

(2) *Geographical and spatial data*: existing primary data may be aggregated (e.g. relevant topographical data, vegetation-related information, forest development plan, area coverage plan) by using appropriate software tools such as the Integrated Nature Information System (INIS; Kirchmeier and Jungmeier, 2000). INIS is based on the idea that in the basic planning process, the natural heritage and the human land use should be assessed in a spatial dimension. By overlaying the map of the natural heritage and the land use map valuable information can be derived, for instance, which areas would be suitable for which type of PA, or which type of zoning should be pursued within the PA (see Figure 26 and Figure 27). Strictly protected reserves or zones might conflict with existing land use. In some case, natural heritage will need human management like extensive land use to exist in a favourable state. Especially the cultural heritage is very sensitive to zoning and the entire category of protected area.

The most important aspects in collecting spatial data of the protected area are:

Location and value of natural heritage:

- What are the objectives of high conservation value?
- Do they already exist or should they be developed?
- Where are these objects or where might they be?

Location and value of cultural heritage:

- What cultural heritages are within the area?
- Do they need special management?

Land ownership and administration:

- Who are the landowners?
- What administrative bodies are responsible?

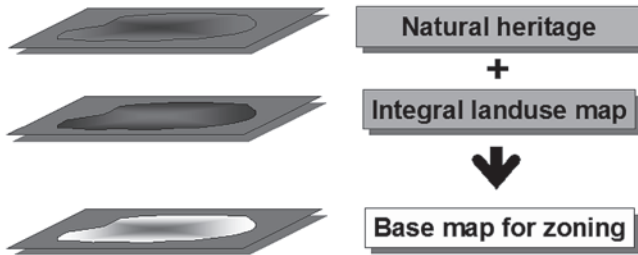


Figure 26: Base map for zoning consisting of a map of the natural heritage and an integral land use map

Source: Kirchmeir et al., 2008.

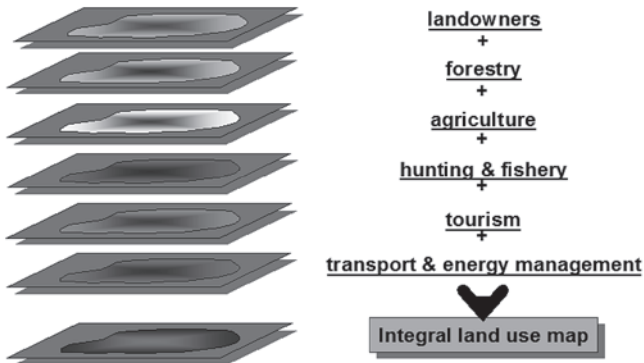


Figure 27: Collection of maps about different land use practice in the integral land use map

Source: Kirchmeir et al., 2008.

(3) *Statistical data*, in particular, economic and demographic data on the community, region and federal state level (e.g. data on business sectors like employees per sector, agricultural data like number of farms, land use statistics, data on tourism such as the number and types of accommodation, demographic data like number of residents, age, education, number of commuters, income and livelihood of residents).

Generally, data of public authorities can be used in basic too, as they can support projects of public interests with their data, such as topographic maps, land registers and parcel networks (water bodies, land use structure, aerial and satellite images), and data and information from universities and research centres (e.g. geology, vegetation, fauna and flora dispersion).

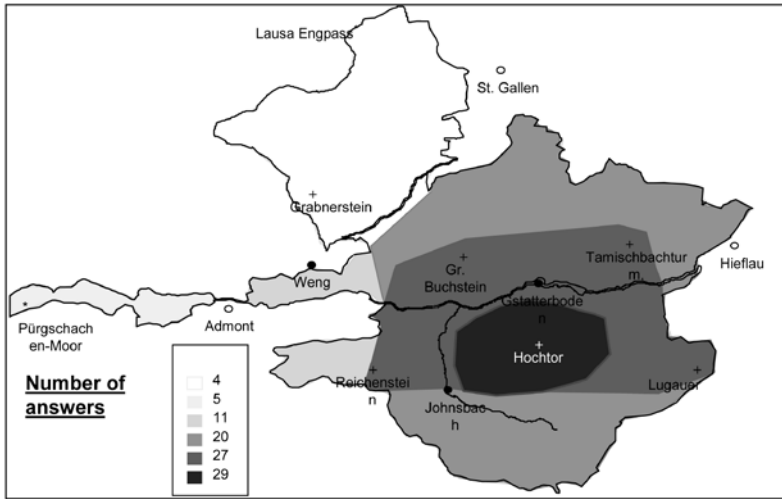


Figure 28: Visualised answers to the question which area suits best for the national park

Source: Kirchmeir et al., 2008.

Advantages of public inventories are that they are often cheap, covering economic and social dimensions. In many cases, time series of data are available. A limitation is that the spatial relation is usually quite rough because the smallest unit is a municipality. In contrast, for example, remote sensing is only cheap if the images are available and the interpretation needs technical equipment and trained interpreters (Kirchmeir et al., 2008).

In addition to the information sources listed above, interviews and inquiries are very valuable. They can be scaled by the amount of available resources, be either qualitative or quantitative and help to draw an “image of the area”. It is even possible to use the results of an inquiry as basis for planning the location of a PA (see Figure 28).

Stakeholder involvement

During the basic investigation phase, it is very important to identify all relevant stakeholders of a new PA. Contact should be established by formal or informal interviews to get an impression about the attitudes, ideas and problems. Additionally, the local knowledge about nature, often based on experiences of decades, should not be lost but used for planning.

Regional development

To support and improve regional development, a profound knowledge of the region is obligatory. Only if there is a detailed database, possibilities and chances for regional development can be identified. PA managers often focus too much on natural and spatial information and neglect social aspects. It is therefore crucial to understand the economic situation of stakeholders and inhabitants in the region from the beginning to invalidate criticisms at the establishment of a PA and prevent conflicts.

3.2.3 Implementation planning

In the PA's implementation plan the framework for the legal and administrative designation of the PA is established. The plan should therefore contain all the basic information that is required for the designation and establishment of the PA. Many features, technical as well as administrative, have to be worked out in the affiliating process during the detailed planning which should start after the PA's establishment (Hocking et al., 2000). Based upon a considerable foundation of knowledge and agreement (basic investigation, participation) the implementation plan establishes the outlines of the project in a way that facilitates the implementation of the protection status. Thereafter, the appropriate category, features and attributes, boundaries and zonation or conservation targets must be checked once again, determined and adapted if necessary. It may also prove necessary to re-examine the legal basis on which the implementation has been set up.

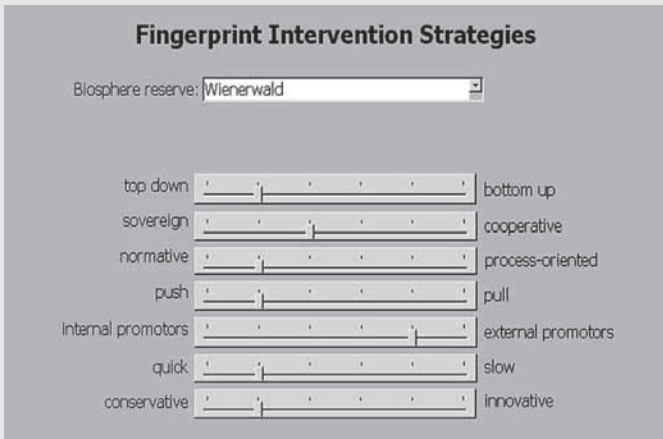
For the PA's implementation plan, it is essential to fix the boundaries of a PA and establish a proper zoning. Depending on the management category of the PA, a set of minimum requirements needs to be considered when fixing the outer boundaries and the inner zones (e.g. size of the PA, types of zones, management objectives, type and extent of land use). For this planning task, it is important to divide the area into smaller parts that are based on the natural conditions. One example is using water catchments as planning unit. Water catchments are visualized in a digital elevation model and help to keep in mind the relief of the land-

scape. In addition, water catchments represent a visible and meaningful ecological units that often correspond to property and land use boundaries.

Box 9: Intervention strategies – fingerprinting the process strategy and the relevant stakeholders.

The development of Biosphere Reserves and other PAs takes place with respect to a set of different concepts: Top-down versus bottom up; Normative versus process-oriented; Sovereign versus co-operative; Push versus pull; Internal promoters versus external promoters; Quick versus slow; Conservative versus innovative. Only the precise and focused strategic mix of process components can lead to a successful process. The successful mix differs from region to region and has to be defined individually, for example by a “fingerprint of intervention strategies”.

This tool, developed in the frame of a Man and Biosphere research project, funded by the Austrian Academy of Sciences, integrates components of various applied perspectives (participation, governance, change management, diversity management, intervention ethics) and allows therefore an strategic rapid analysis of the basic approaches within the development processes. Specifically, each process needs to know which stakeholder are relevant and how they should be involved. A further very simple and clear tool is therefore to fingerprint the stakeholders in a diagram (below: fingerprint of the intervention strategies and the stakeholder in the BR Wienerwald; source: Jungmeier et al., 2009).



In the final version of the boundaries and zonation planning, the minimum criteria as requested by the management categorisation system need to be met and

reflected. The entire planning process should be documented precisely in order to minimise future conflicts (especially a neat and clean version of GIS data is recommendable).

In the implementation plan also the structure of the PA's organisation has to be defined. There is a variety of ways to structure the operations in a PA. At first, the managerial requirements need to be identified to develop a matching organisational structure. There are three basic vehicles for the management of a PA: (1) *Public administration* (quick to set up, relatively cheap, participation eventually limited); (2) *Non-governmental organisation* (participation well engineered, efficiency eventually limited); (3) *Private company* (lean, efficient, management objectives and responsibilities need to be defined precisely, design participatory processes).

Besides the operating entity (i.e. the management of the PA), a number of deciding and consulting bodies may be involved in the organisational chart. In general, the management structures should be designed by demand and should stay lean and effective. It is also strongly recommended to discuss and check the final organisation plan by external experts at an early stage. Box 9 provides an overview of an implementation strategy called "fingerprinting".

For the legal implementation, the concept of the PA should correspond with the legal framework and requirements of the international PA category. In general, there are two types of PA legal implementation, the acquisition of a legal title and the award of a cachet.

For the acquisition of a legal title it is very important to be familiar with the respective legal framework and the encompassing rules of procedure. In the majority of cases, there is a law providing guidelines on PA implementation, therefore, requiring "only" an order or by-law from the government in charge. It is easier (thus faster) to reach consensus on an administrative act than on a law. Nevertheless, it is of great importance that PA managers participate actively in this preparatory stage of legal implementation. The key ideas and planning elements need to be incorporated in the standard legal documents of the by-law and the interaction of public / sovereign versus private / participatory issues have to be well regulated. Active management is crucial at this important interface between planning and administration.

Besides the basic legal implementation of a PA, it is possible to apply for a cachet which can be regarded as some sort of label. A cachet can be awarded by the government on national level or by some well-known international organisations.

Stakeholder involvement

A major issue concerning stakeholder involvement in the implementation plan is the fixing of boundaries and the establishment of a proper zoning system with regards to the requirements of the PA category. This planning task is extremely complex as it nowadays basically means reaching an agreement on a sovereign act by applying participatory methods. Usually, this is a difficult procedure requiring intensive discussion with all the stakeholders.

The boundaries and zonation planning is embedded in the contradictory context of (Davey, 1998):

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

To overcome these contradictory aspects it is important to set up a multiple-stage process with the landowners, also providing repeated exit opportunities. This process should contain the following steps: (1) Outlining the process (defining the steps, the timing, the responsibilities etc.); (2) Identifying name and contact details of all landowners involved; (3) Defining conservation requirements; (4) Presenting the PA idea and planning process to all the landowners (e.g. at an information evening assuring that everyone involved gets the same information at the same time); (5) Holding regular conversations with each landowner (individual or on a group level) until an agreement on an individual level is achieved; and (6) Aggregating and fixing the boundaries and zonation (see Box 10).

Box 10: Implementation plan of Wienerwald Biosphere Reserve (Austria)

The Wienerwald Biosphere Reserve covers about 1000 km² with 61 communities and more than 200,000 inhabitants and is situated in immediate vicinity of the capital city Vienna. To handle all stakeholder groups during the preparation of the implementation plan in 2003, the planning started from the centre outwards. Based on a suitability assessment, 49 possible core zones could be identified. Only landowners of these areas and key stakeholders were selected to specify and discuss in detail the core zone proposals. A broad participatory process with all stakeholders started not before the establishment of the Biosphere Reserve. Due to this very focused stakeholder involvement it was possible to finish the implementation plan in a short time. The idea behind is that a core zone usually requires the most strict land use restrictions while buffer and transition zone have less impact on land use and are easier to establish so that they should be adapted to the location of the core zone (Kirchmeir et al., 2005).

Regional development

The most important aspect for successful regional development in implementation planning is not to stop at the planned boundary of the PA but to go beyond and take in consideration the whole region. The shape of a PA usually is the sum of arbitrary boundaries that do not correspond with other boundaries and infrastructures, such as roads, properties, land use types, torrents and avalanche protection systems. Many landscape elements do not recognize the boundaries of a PA and overlap them, so PA managers have to keep in mind the whole area from the beginning in the implementation plan (e.g. the influence of intensive land use bordering the PA). Furthermore, the PA as a brand can only be developed if there is an active cooperation and common appearance within the region.

3.2.4 Designation and establishment

Once the basic planning and implementation process is finalised, the new protected area has to be legally designated and established. It can either be nominated by national (e.g. National Parks) or European legislation (Natura 2000 Site) or it has to run through the application procedure of an international scheme (e.g. World Heritage Sites, Biosphere Reserves, Ramsar Sites) (Table 5). The institutional and legislative setting for nationally designated sites varies between countries. In contrast, the procedures of international labels are standardised, but differ by categories. Whereas most of the international designations are voluntary labels, which usually exist in addition to national ones, Natura 2000 sites represent a different concept. EU Member States are obliged to nominate Natura 2000 sites according to the mere existence of certain species or habitats listed in the annexes of the Birds and Habitat Directive (see also chapter 3.1.3). By all means, new sites have to be embedded in the related regional development policies and instruments.

Table 5: Protected area categories according to designating bodies

<i>Designations based on national law</i>	<i>Designations based on European law (obligatory)</i>	<i>Designations by international institutions (additional voluntary specific frameworks)</i>
National Parks, Nature Reserves, Protected Landscapes	Natura 2000	World Heritage Sites, Biosphere Reserve, Ramsar Site, Europadiplom, Geoparks, PANParks

Application procedures of selected international labels

Applying for a *World Heritage Site (WHS)* is one of the most selective procedures. To be included on the World Heritage List, sites must be of outstanding universal value and meet at least one out of ten selection criteria which are explained in the Operational Guidelines (WHC 2008). Only Member States who signed the World Heritage Convention may apply. In a first step a country sets up an “inventory” of its important natural and cultural heritage sites, known as the “Tentative List”. Selected sites from this list can be presented to the World Heritage Commission (WHC) by submitting a nomination file. After being evaluated by external advisory bodies (IUCN for natural heritage, ICOMOS for cultural heritage), the WHC has to decide upon the inclusion of the applying site in the World Heritage List. Periodic reports have to be prepared every six years.

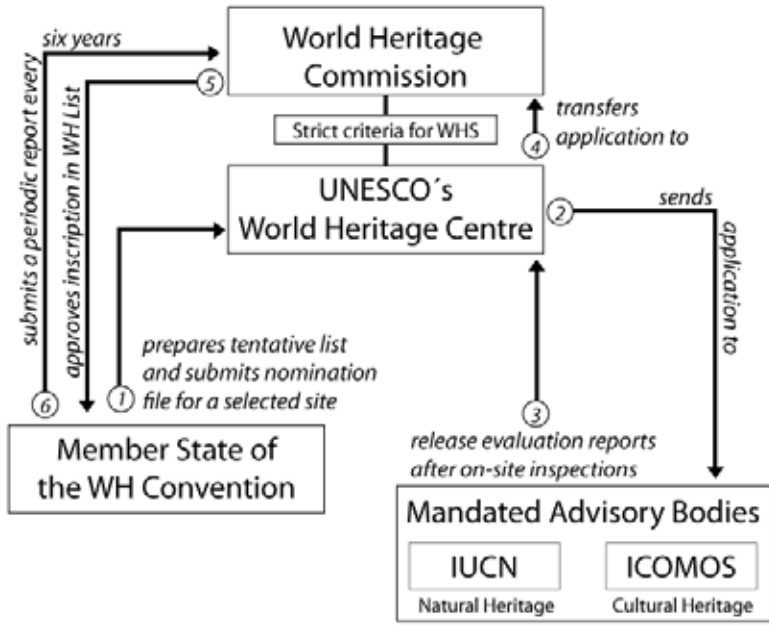


Figure 29: Nomination procedure of World Heritage Sites

Source: Authors' draft based on whc.unesco.org.

Biosphere reserves are also approved by UNESCO, in the framework of its Man and Biosphere (MAB) Programme. Once a region has agreed on this category, a comprehensive nomination form has to be filled out (UNESCO MAB 2004). To complete the form, the Statutory Framework and the “Seville Strategy” (unesdoc.unesco.org) should be used as basic references. The form should be completed in English, French or Spanish and has to be checked by the responsible National MAB Committee, before it can be transferred to the UNESCO office in Paris (Figure 30). Once officially designated as UNESCO Biosphere Reserve, a periodic review has to be produced every ten years. For a practical example of the application procedure, see Box 11.

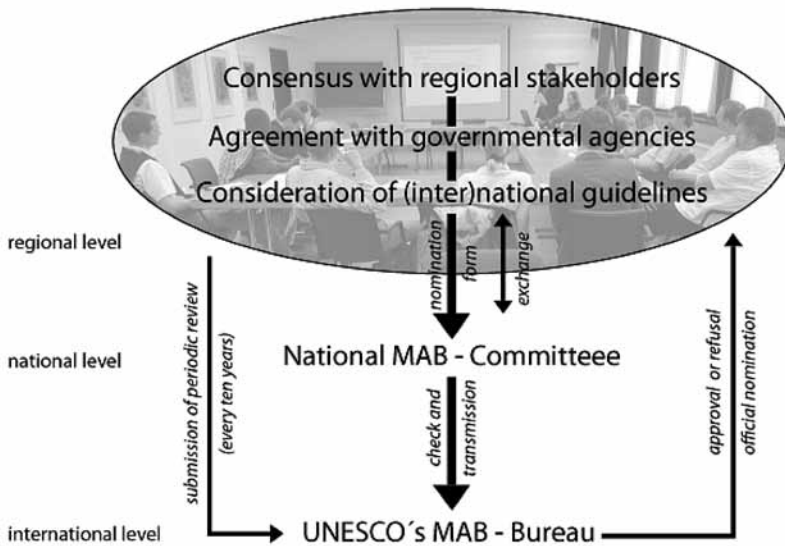


Figure 30: Application procedure for biosphere reserves

After joining the *Ramsar Convention*, each Member State is obliged to designate at least one wetland site for inclusion in the Ramsar List. Sites have to be selected by reference to the “Criteria for Identifying Wetlands of International Importance” and described by using the “Ramsar Information Sheet” which is verified by the Secretariat (www.ramsar.org).

Assigning protected areas to the IUCN Categories

The IUCN categories have been developed to classify the confusing terms used for protected areas worldwide (see also chapter 2.1). The categories system re-

flects the primary management objective of a specific site which applies to at least three-quarter of the total area. The use of the categories is voluntary, but its significance has increased as they started to be applied as policy tools as well as ways of measurement. It is up to the country or governing body concerned to report a new site to the UNEP World Conservation Monitoring Centre, which coordinates the World Database (www.wdpa.org) and compiles the UN List of Protected Areas. On request, IUCN can advise on the assignment and runs individual advisory missions to countries or even individual protected areas (Dudley, 2008).

Box 11: The application of Biosphere Reserve Schwäbische Alb, Germany

Applying for UNESCO's Biosphere Reserve Label involves a lot of planning and needs at least two to three years time – from the decision to apply until the final approval by UNESCO. Besides involving the regional stakeholders, the close cooperation with the German MAB Committee was important as it made sure that we met the main criteria and set the right priorities for the proposal. In that case, the processes of nominating the site under German law and applying for the UNESCO label ran in parallel. As national and international requirements were considered concurrently, there was no need to rework later on.

By involving an external planning agency and one full position in administration for nine months, the required documents were adjusted and compiled in cooperation with the responsible authorities and the regional stakeholders. This development phase was quite intensive and scarcely dimensioned. Moreover, the duration of the application procedure depends on the meeting schedule of the UNESCO board. The relevant dates have to be enquired to adapt the timing for the proposal (development, transfer, feedback) accordingly. It is quite difficult to communicate the long waiting period amongst the inhabitants or media representatives in the region.

In general, the documents required for completing the “Biosphere Reserve Nomination Form” yield important data and information which can be used for evaluation purposes later on (at least for some topics).

Altogether, the establishment and nomination of the Biosphere Reserve Schwäbische Alb took about five years (2004-2009) (Bernert, 2009).

Involving stakeholders in the process

The implementation of a newly designated protected area can either be based on acts of law (compulsory for stakeholders, some law includes fixed compensation), on voluntary contracts (compensation has to be negotiated) or on a label without direct effects on stakeholders. In general, there is a tendency that volun-

tary instruments gain importance, together with participation processes (see Box 12).

Box 12: Nature conservation contracts

During the establishment of the Wienerwald Biosphere Reserve, Austria, all of the legal and contractual elements have been combined. A network of sites established by law already existed (nature reserves, protected landscapes and Natura 2000 Sites). In addition, voluntary contracts for the core and buffer zones had to be negotiated in a long process with the land owners. Subsequently, the zoning was fixed by a national biosphere reserve law. Finally, UNESCO designated the Wienerwald as internationally approved biosphere reserve.

Box 13: Celebrating the inauguration of PAs

On 9 September 2009, 100 years after the first national park has been nominated in Europe, the inauguration of two new National Parks (Kosterhavet in Sweden and Ytre Hvaler in Norway) was condignly celebrated. During a boat trip across this transboundary marine area of great biological diversity, His Majesty King Carl XVI Gustaf and Crown Prince Haakon of Norway hold speeches. Delegates from a high-level EU meeting on biodiversity issues and participants from the annual EUROPARC conference (both hold in Strömstad, Sweden) joined the inauguration.

Pictures below: Inauguration of two new national parks in Sweden and Norway on the occasion of the 100th anniversary of national parks in Europe.



When all negotiations with concerned stakeholders have already been finalised during the implementation planning, once the protected area is designated, it is time to celebrate (Box 13). Achieving such an important milestone should be

highly appreciated in order to rise public awareness and perception, and to thank all those who have been involved in the planning. Designating new National Parks or World Heritage Sites especially enhance the prestige (regional/national pride) which helps to raise awareness among citizens and governments for biodiversity conservation.

Impacts on regional development

Legally establishing a protected area can affect the surrounding region in two ways; on the one hand, there may be land use restrictions coming along with the newly established site (e.g. no more hunting or forestry) which are usually compensated; on the other hand, well-known labels such as National Parks or World Heritage Sites may also increase the attractiveness of a region and pull tourists. For instance, every year, more than 50 million people visit the German national parks, thereby causing a turnover of about 2.1 billion Euros corresponding to more than 69,000 jobs depending on tourism in the respective region. One fifth of the visitors are so called “national park tourists” which means that the existence of the protected area triggers their decision to come to the region (Job et al., 2009). Another study has shown that 42 per cent of European travellers (surveyed in the year 2000) included a visit to national parks as part of their vacation activities. In Costa Rica, even 72 per cent of the tourists visit a national park (Mulongoy and Gidda 2008). In general, it is safe to consider protected areas a good chance for regional development (cf. Mose, 2007; Getzner and Jungmeier, 2002).

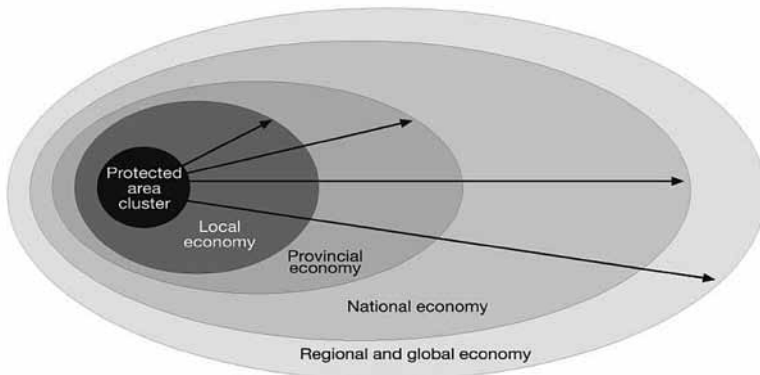


Figure 31: The protected areas development footprint

Source: Authors' draft based on Carew-Reid (2003, 13).

Carew-Reid (2003) postulates that each protected area has a development footprint (Figure 31). However, “the size of a protected area is not always directly correlated to the size of its footprint. But when protected areas are managed in clusters across a landscape, it increases the size and significance of the collective footprint, allowing for specialisation, sharing and exchange to promote development functions. The overriding principle to be applied in managing and expanding a development footprint is that users pay for maintenance of the benefits they receive”.

3.3 Detailed planning

3.3.1 Mission statement and basic concept

In detailing the basic concepts, aims and objectives of the protected area, it is important to consider the differences between a vision and a mission statement.

Many people mistake vision statement for mission statement, and sometimes a vision statement is simply used as a longer term version of the other. In a nutshell, the *vision* defines the long-term view that is desired or intended by the protected area in terms of its fundamental objective and strategic direction (see chapter 3.1.1), and may also describe why it is important to fulfil the mission, whilst on the other hand the actual *mission* should define the main short- to medium-term purpose of why the protected area exists and what it will do to achieve its vision. The mission statement is the link (bridge) between the vision and the concrete objectives of the protected area which is usually described in and implemented by a more detailed plan (PA management plan, see chapter 3.3.2), programme or process.

The mission statement

A mission statement is a short written statement (as is the case with any slogan) of the purpose of the protected area that helps to guide its actions, spells out its overall goals, provides a sense of direction and guides decision making for all levels of the management.

Generally, a mission statement defines the desirable conditions for detailed spatial subjects which allow rectified, “synchronised” orientation. The level of detail may differ according to different demands (see the IPAM Toolbox at www.ipam.info)

The mission statement should paint a picture of the protected area’s philosophy, its core values, its objectives and long term goals, and, it should also develop a corporate identity to express and promote the protected area.

Mission statements should be stated clearly so that it is understood by the general public and should contain the following elements:

- Purpose and aim of the protected area;
- the protected area's primary stakeholders;
- the responsibilities of the organisation towards these stakeholders; and
- the products and services that are offered by the protected area.

The mission statement should also

- be limited to exclude some ventures,
- be broad enough to allow for creative growth,
- distinguish the protected area from others,
- serve as a framework to evaluate current activities, and
- be included as an integral part of the management plan.

A huge advantage of a protected area having a mission statement is that it creates value for those who get exposed to the statement, and these include the external stakeholders, the managers, the employees, and the visitors. A mission statement may not only galvanise the people involved to achieve defined objectives even if they are difficult, but further creates a sense of direction and opportunity and is an essential part of the strategic process of the protected area. Examples of mission statements of protected areas are presented in Box 14.

Stakeholder involvement

Ideally, all stakeholders involved in the protected area should aspire to the mission statement for the purpose of corporate design and corporate identity. As such mission statements, developed in collaboration with other interested parties, taking into account regional interests, policies, strategies and concepts, are vital to the effective implementation and development of the protected area. It is therefore of crucial importance to consider the potential of stakeholders' identification with the protected area and its aims and objectives.

Mission statements can also be seen as a tool to resolve differences between the various stakeholder groups and the direction that the protected area needs to go in order to achieve its vision. Stakeholders affect and are affected by the protected areas strategies.

Box 14: Mission statements of protected areas

US National Park Service

“...to promote and regulate the use of the...national parks...which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” (US National Park Service Organic Act).

“The National Park Service preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world” (www.nps.gov).

uKhahlamba Drakensberg Park World Heritage Site (South Africa)

“To manage and conserve the Park for its globally significant natural, cultural and wilderness values and life support systems through co-management with partners and all stakeholders, and to provide a flow of benefits beyond the boundaries of the Park” (extract from the park’s Integrated Management Plan).

Snowdonia National Park (Wales)

“Our main purposes are to conserve and enhance the natural beauty, wildlife and cultural heritage of the area, promote opportunities for the understanding and enjoyment of the special qualities of the Park by the public, and also to seek to foster the economic and social well being of local communities within the Park” (www.eryri-npa.gov.uk).

Swiss National Park (Engadin, Switzerland)

“The national park is a reserve in which nature is protected from human influence, and in which particularly animal and plant species are yielded to their natural dynamics” (www.nationalpark.ch, original in German, translation by the authors).

The process of drafting a mission statement may include:

- Broad open discussions (i.e. the participants may use methods ranging from highly analytical and rational to highly creative and ‘out-of-the-box’ thinking) which focus on various topics pertaining to the protected area and its goals, including divergent experiences around daydreams, and sharing stories;
- the protected area’s products, services, markets, values, public image and survival;

- changes that may be needed in the wording of the mission statement because of new suggested strategies during the strategic planning process;
- making sure that the wording of the mission is to the extent that management and employees can apply some order of priorities in how products and services are delivered.

Regional development

A mission statement may not by itself contribute to regional development. However, it is important that the mission statement includes some references to regional development in order to underline that the protected area may have a stake in regional development, and that it is also directed towards the achievement of development goals under the condition that the park secures the biodiversity conservation objectives. For instance, the mission statements presented in Box 14 include references to the support of regional development.

3.3.2 Ecosystem based management plans

Once planners established a protected area and agreed on the main purpose of the new site, a management plan has to be developed to define what has to be done in which time frame, in order to achieve the main objectives. On the one hand, such a plan allows for continuity and stability of the management. On the other hand, it assures a high level of transparency for different players such as the management staff itself, but also for communities, land users, NGOs, authorising agencies, politicians or international bodies. Sites lacking an effective plan are vulnerable to inconsistent management which may result in a waste of resources, and, worse, in the loss of the special interest of the site (NCC, 1991).

A management plan is “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. Plans may be more or less prescriptive, depending upon the purpose for which they are to be used and the legal requirements to be met” (Thomas and Middleton, 2003).

All management plans should answer the following five key questions (Alexander, 2008):

- (1) Why are we here? (Legislation, policy and mission)
- (2) What have we got? (Description of the site’s assets; baseline)
- (3) What is important? (Definition of priorities through evaluation)
- (4) What do we want? (Vision, conservation objectives, limits of acceptable change)
- (5) What must we do? (Action plan with concrete measures to achieve the goals)

Monitoring should be regarded as integral and essential component of the entire management process. Well-stated management objectives are critical in determining whether a plan is effective or not; they should be SMART (specific, measurable, achievable and time-related) and reflect the park’s purpose, significance and exceptional values.

Even if there is no generally accepted standard format for management plans, some standard elements and certain structures are consistently recommended by different organisations (Figure 32).

Whereas the (long-term) vision provides a statement of what the protected area should be like in 20 to 30 years, policies setting out *how* the vision will be achieved typically are decided upon within a time frame of usually 5 to 10 years. In contrast, the (short-term) operational action plan is reviewed every one or two years and should be linked to the annual budget (period of validity). Thus, management plans are often divided into two different parts, with the action plan separated out as easily adaptable working document (Countryside Agency, 2005).

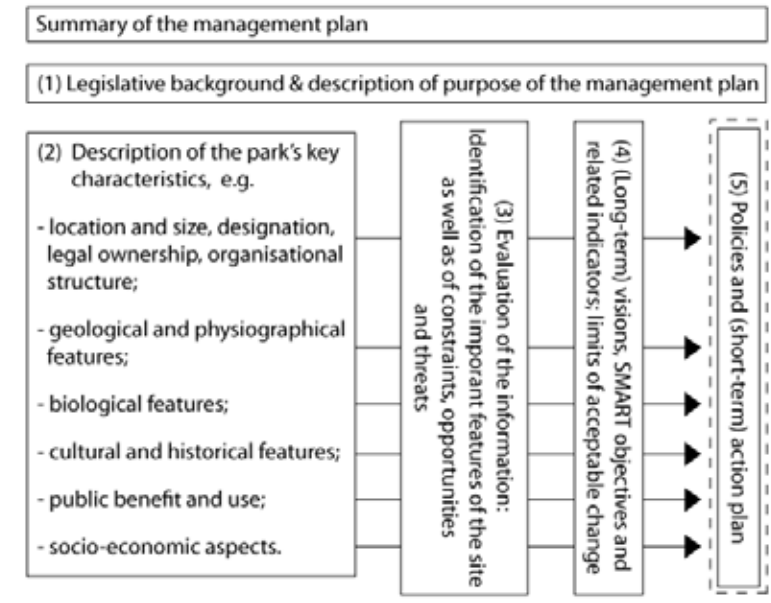


Figure 32: Standard components of a management plan

Source: Authors’ draft based on Thomas and Middleton (2003), Countryside Agency (2005) and Alexander (2008).

The presentation, style and content of a management plan can have a great influence on whether it is well received and understood by users (park staff). In general, the plan should be (Clarke and Mount, 1998)

- clear and accessible (easy to read, jargon free and well presented);
- concise and comprehensive (no longer than necessary, but with enough information to fulfil its functions; references can be made to further data sources); descriptive information should not be over-emphasised since this can significantly delay the production of a plan;
- accurate and objective (without major errors and with criteria for all judgements clearly explained);
- systematic and logical (with clear rationales given for all proposals and without contradictions regarding different objectives);
- acceptable and motivating (to all those with interest in the site);
- precise and practicable (with clear, SMART objectives, realistic methods to achieve them and outcomes which can be monitored); as well as
- focused and effective (fulfilling its purpose as tool for site managers, meeting needs of users and legal entities).

Box 15: Best practice management plans

Functional recovery of the salt pan of Comacchio in *Delta Po River Park* (Italy) to preserve habitats and species and drafting of the Management Plan: The management plan provides controlled access for tourism. The management plan is the first example in Italy developed according to the methodology defined by the guidelines of the Italian ministry of the environment (managing authority: “Consorzio Delta Po Park Emilia-Romagna”).

Sustainable grazing with autochthonous cattle breed at the Korn locality in the *Deliblato Sands* Special Nature Reserve (SNR) in Serbia: In order to preserve prairie ecosystems and biodiversity and to conserve autochthonous cattle breed, the Podolian cattle was reintroduced (managing authority: Public Enterprise (PE) „Vojvodinasume“).

Implementation of the management plan for the *Keutschacher Moor* protected area (Austria): On the basis of a biotope inventory of the “Keutschacher Moor- und Seental”, sections of the protected area have been defined for biodiversity management (managing authorities: government of Carinthia; NGO „Natur und Umwelt im 4-Seen-Tal Keutschach-Schiefling“; cf. Berchtold and Kerschbaumer, 2007).

Even if planners, managers and donors agree on the significance of planning, not all management plans can be considered successful. “By far the most common

situation is that plans tend to gather dust or at best receive minimal implementation, despite the tremendous national (and frequently international) technical cooperation efforts which go into their preparation” (Budowski and MacFarland, 1982). In addition, management plans may be drafted for the full range of activities in a protected area, or only for certain projects at the site (see Box 15).

Quite often external consultants are contracted as this seems to be the most cost-effective way of producing management plans. However this bears the risk that, at the end of the day, the money has indeed been spent and the plan has been produced but it is then forgotten because the site managers lack a sense of ownership. Considering management planning as a process instead of simply fulfilling the task of producing a final document may solve this problem. Managers should bear in mind that management planning does not end with the completion of the plan. The site managers also have to be the site planners. Whenever possible, they should prepare the documentation or at least supervise the plan’s production. They are also responsible for maintaining the planning process and for implementing the policies (Alexander, 2008). Above all, ongoing monitoring has to take place to test the effectiveness of the implemented measures. Flexibility is required to ensure that management can adapt to changed situations and to react on lessons learned. Such feedback loops may thus lead to wise adaptations to the original plan or impact the development of the next version of the plan (Thomas and Middleton, 2003) (Figure 33).

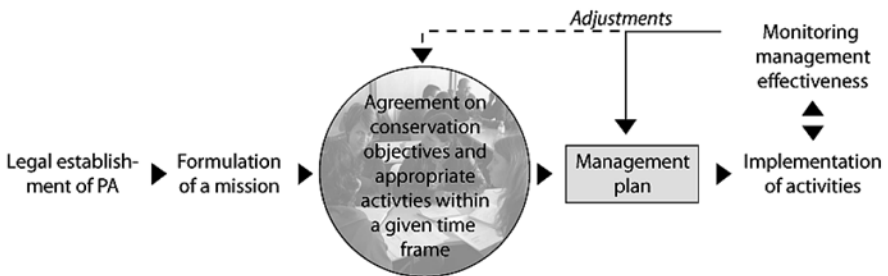


Figure 33: Management planning as a process of drafting, implementing, adjusting and monitoring

Involvement of stakeholders in management planning

It is strongly recommended that all relevant interest groups are involved in the process of developing a management plan for a protected area. Management plan-

ning is about sharing a dynamic process with others in order to reach a common agreement. It is about exchanging opinions and learning from each other (Alexander, 2008). This can be a time consuming task and carries risks such as trapping managers between the unrealistic aspirations of some stakeholder, donor or pressure groups (Scholte, 2000). However, it is generally worth the effort as the involvement of stakeholders in management planning (Thomas and Middleton, 2003)

- increases a sense of ownership and commitment to management objectives;
- facilitates the public support for the protection of the area;
- raises the awareness of changes in management directions;
- links conservation with social and economic development; and
- provides a mechanism for exchange of opinions and conflict resolution.

As there are many different interest groups the first step is to identify the key stakeholders which should be involved in the process and to define the level of their participation (see also chapter 2.4). Skilled and competent facilitators are required for facilitating the moderation of hearings and other events.

Box 16: Involving stakeholders in management planning in Australia

The following methods have been used to involve people in the planning process of the New South Wales National Parks and Wildlife Service in Australia (Thomas and Middleton, 2003, 59):

- press releases/advertisements inviting submissions;
- radio/TV appearances to discuss planning issues;
- publication of specialised pre-planning brochures which provide detailed discussion on specific issues;
- publication of draft plans of management;
- open forum public meetings to present and discuss planning documents;
- pre-arranged meetings of special interest groups brought together to resolve conflicting requirements;
- consultations between planners and individuals/organisations;
- analysis of written public submissions by agencies and third parties;
- referral of public submissions to external advisory groups e.g. consultative committees comprising community leaders/representatives;
- formal involvement of independent statutory advisory committees in assessing plans and public submissions; and
- input through political processes, particularly in regard to more difficult issues.

Alexander (2008) stresses that it is crucial for stakeholders' participation in management planning that it is clearly communicated what can and what can not be decided upon by participating stakeholders. The worst possible mistake is therefore to give stakeholders the impression that something is debatable only for them to find out later on that it is not.

Participation in the process should take place as early as possible and continue throughout. Enough information has to be provided to help people make decisions based on a sound understanding of the issues addressed. Communication should be two-way, which means the opinion of others is listened to, valued, and a compromise is sought if feasible from an ecological and legal point of view. Besides, it is important to allow for sufficient time for developing relationships and a common understanding of the complex task (Thomas and Middleton, 2003). Once the management plan is finalised it should be shared with the broad public. However, it is advisable to exclude some of the sensitive or confidential information (e.g. the location of rare or endangered species) from the public version of the document (Alexander, 2008). Box 16 shows a range of potential methods to involve stakeholders.

Local communities are often not used "to being consulted and some may have difficulty in following even the clearest and most readable of documents" (Phillips, 2002, 97). Therefore, less conventional techniques, such as village dramas, school plays or road shows, might also be used – whatever it takes to get people involved. Local elders, community leaders or teachers may help to advise the agency on the most appropriate way to engage the public (Thomas and Middleton, 2003).

Relation to regional development

Many national, regional and local plans or development strategies influence protected areas; they have to be considered and reflected when management plans are drafted. Thus, protected area authorities are advised to coordinate their planned actions with existing policies on the local, regional and national level without compromising their PA specific goals and objectives (Figure 34).



Figure 34: The strategic fit of protected area management plans to other plans

Source: Countryside Agency (2005, 35).

The arrows represent the dominant flows of influence.

3.3.3 Design of regional economic programmes

The European Lisbon Strategy aims at making Europe the world’s most important knowledge-based society. Furthermore, all kind of services (education, medical care, sporting and tourist activities) will continue to expand during the next decade. It is obvious that PAs can be crucial in shaping and promoting these large-scale developments. PAs can also derive benefits from these developments. The field of activity of PA management, “design of (regional) economic programmes”, focuses upon the implementation and development of sustainable economic structures whilst paying close attention to issues relating to PAs. As opposed to earlier attitudes, PAs nowadays are seen as an integrated, co-existing element of the economy, contributing considerable benefits to a region. A PA’s structure can become an interface between regional demands and global developments. Of course, these functions must be developed properly and undertaken as part of a participative process.

Importance of protected areas to be involved in regional development

Protected areas such as national parks are and cannot be “islands of sustainability” within a region that does not function sustainably. Actions taken outside the

protected area may affect biodiversity management and other tasks of PA managers, and actions undertaken by the PA management have impacts on the region outside the protected area.

This fundamental understanding is also true for the (economic) development of a PA region. Chapter 2.2 has already outlined the potential significance of protected areas for the regional development in terms of providing goods and services specific to biodiversity conservation (ecosystem goods and services). In cases where the management of a protected area is weak, pressures of growing populations, widespread poverty, and unsustainable land use practices outside the protected area boundaries can cause people to engage in illegal and destructive encroachment within protected areas. The future viability of protected areas appears to hinge on the cooperation and support of local people. This cooperation and support, in turn, depends on whether the areas can provide local communities with benefits that are sufficiently concrete for people to want to keep the area protected.

This section, thus, concentrates on the task of PA managers to become involved in the design of regional (economic) programmes. This task is important from various aspects:

- Protected areas aim at sharing the benefits with local and regional residents. Costs and benefits should be shared fairly between “winners” and “losers”. Support and involvement of PA managers in regional policies can help to achieve the aims of a fair distribution and of benefit sharing.
- The effectiveness of PA management not only depends on the management plans and policies implemented, but also on the voluntary contribution of all stakeholders involved. For instance, it is never possible to monitor all activities outside the park that may have an effect on the park’s ecosystems. Therefore, it is important to provide incentives that the surrounding region “cares” for the protected area and supports its aims.
- The protected area is usually not the driving force of drafting and implementing regional development programmes, but is a *stakeholder* in such processes together with others (e.g. local companies, public authorities).

Before a protected area becomes involved in the process of designing regional development programmes, the region’s economic situation needs to be analysed and understood so as to allow the protected area to effectively contribute to regional development. Usually, such work is done by economists and regional scientists commissioned by local and regional authorities to provide the informational basis for designing such programme.

However, the protected area plays a role in working together with experts and the regional authorities to support sustainable development, either by creating new

jobs or increasing the overall economic prospects of the communities that share the region.

Protected areas can be crucial in shaping and promoting large scale developments that bring benefits to the region, whilst on the other hand the protected area also gets benefits from these developments. The design of regional based economic programmes focuses on the implementation and development of sustainable economic structures whilst paying close heed to issues relating to protected areas. Protected areas nowadays are seen as an integral part of the region with a 'duty' to help drive the economy of the region and to contribute to the benefits in the region.

Cooperation in regional development

As protected areas become involved in co-operation with regional economic programs they need to

- develop and provide a clear picture of the strengths, weaknesses, opportunities and threats confronting the economic development of the protected area's region;
- identify consumer demands and create a portfolio of services and products which can be produced and/or provided by the local economy, and supported by the protected area;
- maintain the core values of the region and gain added value by local/regional unique selling propositions (USP's);
- provide a platform for presenting, promoting and selling regional products and services which are close to the protected area; and
- support and stimulate selected, good investments and retain external expertise to choose, support and evaluate activities and projects.

These tasks are not fulfilled "in isolation" but are done by PA staff during the process of designing regional economic programmes and are therefore also done in close cooperation with other stakeholders and regional authorities, in particular with local companies and the local/regional chamber of commerce.

Box 17: Specific products using the protected area as an indicator of high quality

The Austrian brand “Ja Natürlich!” sells milk products of organic farming that are produced in the Hohe Tauern National Park region. The package provides information on the national park and a small map of the location of the park and the region.



Box 18: Problematic regional development: Carpathian Biosphere Reserve

Wallner et al. (2007) present a survey of local stakeholders that show that in the Carpathian Biosphere Reserve (Transcarpathia, Ukraine), very specific issues as (negative) effects due to the biosphere reserve occurred: (1) restrictions in the use of forests, (2) loss of agricultural and pasture land, (3) increase in wild animals, and (4) protection from floods.

“In the biosphere reserve, the present economic situation is severe so that most people heavily depend on subsidiary agricultural production. But for this they need land and access to resources. At the same time the administration of the biosphere reserve calls for biodiversity protection as their main purpose of the biosphere reserve, a contradiction to local people’s need for the use of natural resources. Local people value this as a disadvantage of the biosphere reserve. [...] If the administration of the biosphere reserve allows the use of natural resources by local residents, this is often in combination with the requirement of obtaining permission. [...]

A rezoning of pastures and meadows to the core area of the biosphere reserve took place. And with the state not being able to compensate the involved people with money or with other land, people regarded the biosphere reserve as a governmental agency defining the rules without consulting the people. The people therefore consider the power balance between themselves and the biosphere reserve as being of a vertical order from the national level in the form of the biosphere reserve as a state authority affecting the people on the regional level” (Waller et al., 2007, 111f.).

Box 19: Best practice in local and regional business partnership programmes

Gesäuse National Park (Austria)

The highest priority (mission) of the business partnership is to improve production and value added in the region of the national park.

Established in 2004, the partnership programme now serves as a lively business network of local and regional companies cooperating with the national park management and within the network.

The partnership aims at strengthening the local economy, to conserve the unique landscape of the “Gesäuse” region and to use the landscape as a singular tourist destination.

All partners in the network have to fulfil environmental and quality standards developed and approved by the member companies in the network, together with the national park administration. All partners strive to support the philosophy of the national park, and to communicate this philosophy to their customers.

Each local branch forms a sub-group in the network. The following branches are included partners in the network: Tourism, education, culture and handicraft, farmers, leisure and sports, and transport companies. All partners are allowed to present the “national parks partner” logo in their marketing activities (www.nationalpark.co.at).



Nationalpark
Wattenmeer



NATIONALPARK-PARTNER



Wattenmeer National Park (Germany)

The partnership programme is set up for accommodation for the youth. All partners taking part in the programme have to be certified according to “Viabono” standards. That means that the participating hostels and pensions not only inform their guest about the national park, but also have to comply with a range of environmental standards such as mobility by public transport, environmental information and quality standards, and regional products and services. Environmental education both of guests and staff is also an important criterion (www.wattenmeer-nationalpark.de).

The results of these efforts might be:

- Development of local/regional products (goods and services) specific for the protected area’s region, produced and/or marketed by local companies, and

- supported by the PA through labelling, guarantee of quality standards, or sustainable production (see Box 17).
- Draft or re-draft the economic programme in order to direct the regional development strategy towards using and committing the region to the protected area. For instance, a region might consider itself as a “national park region” where all activities are directed towards wider national park policies (e.g. tourism, agriculture, and handicraft). Studies show that only if a region substantially commits to “using” the protected area for its regional development strategy, the park will also exhibit significant (positive) influence (e.g. Getzner and Jungmeier, 2002). However, not all protected areas are perceived as beneficial to the regional economy and lack compensation and regional development programmes (see Box 18).
 - Establishment of business networks between the protected area and the surrounding economy (see Box 19).

Box 20: Local Conservation Boards

A good example of how protected areas and stakeholders work together is in Kwa-Zulu Natal, in South Africa, where the province has legislated regarding Local Boards. These Boards are not prescriptive and have provided for a new and unique system that allows neighbouring and business communities to become involved in the management of the protected areas of the province. These “Local Conservation Boards” give legal substance to the neighbour relations and community conservation programmes which contribute to regional economic development and are run by Ezemvelo Wildlife. In a nutshell Ezemvelo Wildlife and the local boards which are represented by

- neighbouring communities,
- tribal authorities,
- agriculture boards,
- business groups,
- tourist boards, and
- local councils (appointed by the Minister).

The boards are responsible for compiling, monitoring and implementing management plans for the various protected areas, integration of protected areas and surroundings, facilitation of community development, promoting objectives of the protected area and being part of the decision making process at the local level. (www.kznwildlife.com)

Stakeholder involvement in designing regional programmes

Stakeholder involvement shows that the representation of relevant local groups on management committees of protected areas can greatly facilitate communication of project objectives and activities to the people, promote a participatory feeling and eliminate misunderstandings.

It should also be noted that protected areas can meet society's needs if social analysis is fully integrated with economic and ecological/biological analysis in their application to a particular protected area. These areas will not be protected unless their management is acceptable to the local communities and they themselves are involved in, and benefited by the existence of the protected area (McNeely et al., 1990). As such the importance of the stakeholder is crucial to achieving the aims and goals of the protected area.

3.3.4 Specific planning (subsidiary plans)

Besides their commitment to conserve natural ecosystems and biodiversity, protected areas more and more have to deal with the broad field of "sustainable regional development". Thus, the planning process also has to cover additional aspects, such as

- access to the area,
- mobility and visitor flows,
- public and private transport,
- energy efficient engineering,
- waste water treatment,
- river basin management,
- concept for specific issues (climate change, integration with other regional projects); and
- disaster prevention.

A comprehensive overview of planning which (might) affect the protected area should be gained and interfaces with other planning agencies created to set up specific planning strategies, affiliated to the park's requirements. Given the complexity of making a "superior master plan", it is important that all policies and subsidiary plans should be integrated at different levels, that their relationship should be made clear, and that all management actions in different plans should be co-ordinated (Eagles et al., 2002). The following highlights a selected range of subsidiary plans and issues to be addressed.

Access planning

Management planning for protected areas in Europe for a long time focused on habitat and species protection. Access planning is concerned with all the provisions made for people who visit or use a park for any reason (e.g. recreational use of local visitors and tourists, but also business purposes for residents of the protected area). Ideally, a separate section on access should be an integral component of the overall management plan and not an independent document (Alexander, 2008)

Box 21: Planning environmental friendly mobility for visitors and residents

The *Bavarian Forest National Park* (Germany), for instance, is well connected to the public transport system. All visitor infrastructure and the main hiking areas can be reached by bus or train which allows for even more mobility as visitors are free to do loop hikes and don't have to return to their starting point where the car is parked. The operators of the public transport systems are partner companies of the national park and support its efforts towards environmental friendly mobility. A train stop was established at Ludwigsthal, where the "House of Wilderness" visitor centre was opened in August 2006. In the same year, the route network was extended towards the Czech Republic where Šumava National Park adjoins to the Bavarian park. Visitors using public transport only have to pay half the prize when booking excursions or educational offers of the national park. A special service was introduced with the initiative "KulTOUR in der Waldbahn": Every first Sunday of each month the local train becomes a stage for cultural events or information on the natural environment. Side events are organised, such as excursions in cooperation with the national park, music and cultural performances; they are free of charge, passengers just have to pay for the normal transport ticket (more information can be found at www.nationalpark-bayerischer-wald.de).

Day after day, enormous commuter flows move from the rural areas of the Rhön region (low mountain range in Germany) towards the Rhine-Main agglomeration and back. The management team of the *Rhön Biosphere Reserve* now initiated a pilot project to reduce the individual motor traffic and contribute to climate protection: a digital agency for arranged lifts shall be established for the whole region. After proving the suitability for daily use, such agencies shall be developed for all rural regions in Germany (more information can be found at www.nationale-naturlandschaften.de).

However, the topic may be further developed through even more specialised plans or strategies intended to guide tourism and recreation within a protected

area. Examples are Visitor Use Plans, Visitor Activity Management Processes (VAMP), Tourism Optimisation Management Models (TOMM), Limits of Acceptable Changes (LAC) or Visitor Impact Management Plans (VIM) (Eagles et al., 2002). Box 21 highlights concepts in two German parks, while Box 41 (page 176) addresses the issue of access from the perspective of visitors with special needs.

Participation of stakeholders in specific planning

Even though specific planning addresses “technical” issues, participation may play an important role, of course, depending on the topic and context of specific plans.

Regional development

Subsidiary planning should occur within, and acknowledge, the regional context of a particular protected area and should take into account the demands and provisions in nearby areas. Even if only “technical” issues are addressed in specific plans, regional development may be accounted for when drafting and designing these plans.

3.4 Management of established PAs

3.4.1 Personnel and organisational development⁶

Crucial resources of a PA are the motivation and competence of individual employees and the responsible bodies. To a high degree the internal structure of the PA’s administration and management determines the performance of the PA. Personnel and organisational development is a dynamic and continuous process. Having a regard to national circumstances may necessitate considering different alternatives. The existence of other authorities, the degree of stakeholder involvement, aspects of fund raising, legal possibilities or constraints are the main factors influencing the choice and development of the organisational form. The main tasks performed by the PA agency include developing an identity, developing strategies, policies and objectives, together with competences, structures, processes, technical infrastructure and staff management. Whilst different types of organisation may be appropriate to run the PA (governmental, NGOs or private

⁶ This chapter is written by Roger Crofts largely from personal experience as Chief Executive of a government agency, Scottish Natural Heritage, for a decade, and from undertaking many IUCN World Commission on PA missions and advisory activities around Europe.

companies), the type of organisation should be carefully chosen and developed with a long-term perspective.

The challenges of organisational development

Most PA organisations are founded on a combination of one or more of the following – the conservation of biodiversity, geodiversity and landscape diversity, along with positive interaction with civil society as one of the beneficiaries. They frequently are organised with only an executive structure, with little or no non-executive involvement through a board or trustees, and occasionally with advisory committees to represent specific interests, most usually the scientific and conservation communities.

With the increasing and legitimate demand for engagement by and with stakeholders and for PAs to make a positive contribution to regional economic development, there are many challenges if these demands are to be met. The PA organisation will need to review its purpose and revise its strategy, it will need to evolve its organisational culture, it will need to adopt new operational approaches, it will need to employ new skills and competencies, it will need to re-examine and probably change its governance structure and it may need to change its organisational structure (see Phillips (2003) for an excellent summary of changes from older to newer approaches to PAs; see IUCN (2009) for an up to date statement).

All of these challenges are addressed in this section. They are treated in priority order. Beware practioners of doing the steps in the wrong order! It is all too easy, for example, to change the structure of the executive staff without knowing why the current structure is not fit for its future purpose, why improvements are needed and how they can be most effectively delivered. A logical and systematic approach is recommended.

The six challenges addressed are a prelude to the more specific contributions on particular aspects of management and development of PA organisations which are in the succeeding sections.

1. Strategic re-orientation

This step involves considering whether the purpose of the PA organisation can embrace stakeholder involvement, regional development and benefit sharing. It is most likely that these aspects have had limited consideration. However, documented experience (Borrini-Feyerband et al., 2004a and 2004b; Lockwood et al., 2006) and personal experience shows that for the PA organisation to operate effectively it does need to engage with a wide range of stakeholders and to produce

benefits regionally, as well as locally and nationally, and in some cases internationally.

Organisations are cautioned not to neglect or set aside the primary purpose of the PA, which will most likely be the conservation of natural and cultural assets. To do so would change the character of the organisation fundamentally and mean that it was not fulfilling its primary purpose. This may seem obvious, but cannot be overemphasised.

The question arises how the strategy should be re-orientated. The key points to be addressed are:

- Identifying the range of stakeholders: There is an in-built assumption that these are the local communities, but there are usually wider ‘communities of interest’, such as conservation bodies, user interest bodies, and economic development interests who have legitimacy and should be included. The practical advice is to draw the net widely at the outset.
- Identifying the public goods and services provided, such as ecosystem services.
- Defining the current benefits of the PA to stakeholders and to regional development.
- Identifying potentially new benefits which could be developed by the organisation working with stakeholders.
- Reviewing the geographical boundaries of operation of the agency to allow it to operate beyond the PA boundary.
- Identifying as a key objective partnership working to deliver public benefits locally, regionally, nationally and internationally.
- Considering whether a different PA model should be adopted or used as a benchmark for the re-orientation process. An obvious model is the UNESCO Biosphere Reserve (www.unesco.org) and another which could be adapted is the PANParks model (www.panparks.org).
- Developing an implementation programme for stakeholder engagement and public benefit at different geographical scales.
- Establishing key performance indicators as a means of monitoring and measuring achievement and allowing periodic review of the strategy.

2. Evolving organisational culture

An organisation developed to deliver conservation will inevitably have a culture based on scientific research, evaluation and monitoring and practical management of the natural and cultural features and the people using the PA. However, greater engagement with stakeholder communities and regional development

can be thought to dilute the original purpose of the organisation and undermine the commitment of the staff and management to the primary propose.

Key issues which need to be addressed are:

- Are the current values appropriate for addressing the evolving organisation?
- Do they specifically encourage staff to engage positively with other stakeholders and regional development than their normal allies?
- How can the organisation best describe, in terms understandable to all, how it wishes to engage with stakeholders and regional development interests?
- What is the most appropriate way of describing the necessary positive 'can do' culture imbued with the patience and perseverance that will be necessary?
- Consider how will stakeholders react to the evolving culture, maybe ask a selection for their reaction!
- Active promotion of the values of the organisation and the evolving culture by the head of the organisation to all staff.
- Ensure that the staff appraisal systems include assessment of individual performance in delivering the revised culture and values.

This activity needs to be undertaken as a collaborative exercise involving all levels of staff and management, rather than being imposed from the top. This approach will ensure that sensitivities and concerns are recognised and effectively addressed, and that all staff can participate with their ideas and suggestions and therefore are likely to have a greater commitment to the outcome than if it is imposed upon them.

3. Developing new approaches to working

The challenge of working with stakeholders and delivering benefits beyond those traditionally considered by the PA agency means developing new approaches. This takes time, should not be rushed, but neither should it go at the pace of the slowest.

The key issues to developing new approaches to working are:

- Learning how to work in partnership with bodies and groups with different objectives and different ideals.
- Learning how to understand the perspectives, needs and approaches of partners.
- Learning how to relate the needs of partners, as expressed in their strategies and plans and in their approaches, to the objectives of the PA organisation: identifying points of synergy as well as points of difference.
- Learning how to communicate effectively with others rather than indulging in the organisation's own jargon.

- Thinking and acting creatively about partnerships that have never been part of the organisation’s approach in the past.
- Engaging with stakeholders to share ideas and interactively develop new ways of working and new approaches to the resolution of problems.

Figure 35 illustrates the likely community of interests which the PA organisation should interact with. This should be on a bilateral basis and also by developing a network of all of the interests.

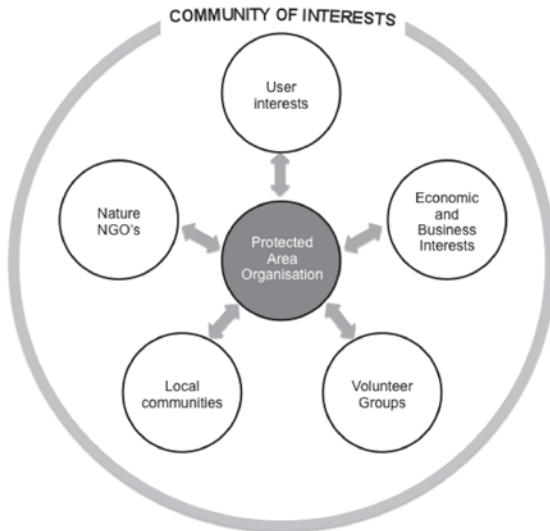


Figure 35: Community of interests interacting with a PA

Source: Authors’ draft based on Croft (2010).

4. Engaging and developing new skills

PA organisations will have been traditionally staffed by those with expertise in conservation: biology, earth science, ecology and ecosystem management being the principle skills with a focus on scientific research, knowledge gathering, monitoring and data management. As organisations have developed, they have embraced other expertise and skills, such as education, communication, people management, law enforcement, monitoring, strategic planning and review, financial management, fund raising, and meeting international obligations.

With the demands placed on the organisation for engaging with stakeholders and delivering benefits, comes the requirement to engage staff with other skills sets and to provide the opportunity for existing staff to re-skill as part of their personal career development. Critical amongst the skills required is the ability to develop partnerships, to be able to negotiate deals of benefit to all parties, to be able to resolve conflicts between different interests, and to be able to communicate with a variety of stakeholders. Whichever route is chosen: internal re-skilling or external recruitment, it places a demand on the management of the organisation to ensure that the skills are recognised as essential by all staff and to persuade existing staff to work effectively with their new colleagues or the old colleagues that have been re-skilled.

In addition, to become really effective in partnership working, delivering benefits and engaging with stakeholders requires the whole organisation to take on board these new approaches and styles of working. This will require all managers to encourage their staff to embrace not only the strategic re-orientation and evolved culture referred to above, but also to develop training programmes for all staff in recognition of the changing circumstances and changed operating environment of the organisation.

The changes in organisational culture and approaches to work, alongside engaging and developing new skills, all provide an opportunity for staff to develop their careers. This requires commitment by all levels of management, led by the chief executive, to stimulate appropriate mechanisms for personal development and allow staff to identify chosen routes which will benefit them and the organisation. A staff development programme should be instigated to allow staff to prepare their proposals and discuss them with line managers; for line managers to be sufficiently well informed of opportunities to advise and encourage their staff; and for senior management to devise means of stimulating take up of opportunities, on the job and off the job.

5. Changing the governance

Once the four preceding stages have been put into practice, it will be necessary to review and if appropriate modify the governance structure at non-executive and executive levels and the staff structure (see Swiderska (2008) for a general treatment; see Dudley (2008) for definition of governance types).

Many PAs organisations do not have a non-executive tier and are entirely governed by the senior management or report directly to the government at regional or national level. Some organisations have adopted consultative arrangements with key stakeholder groups, such as the conservation science community and the wider stakeholder community, but as their name indicates, these are merely advi-

sory and do not have any formal role in the governance of the organisation. Some PA organisations have, since their establishment, had a governance structure at the non-executive level, for example the national parks of England and Wales, however, these are the exception rather than the rule.

Two forces are operating on many PA organisations to change their governance structures: the push to come out of isolation from a narrow scientific and conservation body, and the pull of engaging more effectively with the wide range of stakeholder interests. PA organisations should therefore consider very seriously developing a non-executive level of governance. It should have the responsibility for developing and overseeing the implementation of the organisation's strategy and for determining the level and disposition of resources, and for reviewing the overall performance of the organisation against key performance targets as part of the strategic action plan. There should be an appointment process which allows representatives of all of the 'communities of interest' to apply. This process should comprise of a transparent mechanism for appointment, for setting of lengths of appointment and for periodic review of individual and collective performance. This is a model well developed in the UK, for example, for charities, such as PAs, NGOs, as well as for governmental bodies, such as national park authorities.

It might also be appropriate to establish broader based consultative mechanisms, either on a bilateral basis between the PA organisation and individual partners, or on a more collective basis through establishment of an advisory body or a series of such bodies. Care should be taken that there are not too many such bodies and that their membership is not too large as these will create a cost for the organisation which, if not properly managed, will be greater than the benefit received.

At the executive level, most organisations have a top level management body, variously termed the executive management team, the executive board or other similar name. This body will consider itself as the control team of the organisation. That is why it is necessary to have a non-executive tier as a corrective to executive dominance, as a source of engagement by a wider groups of interests, and as a way of independently reviewing the performance of the organisation. It should be obvious, therefore, that the role of the top executive team is to ensure the delivery of the strategy and implement action plans of the organisation and to set out means of monitoring performance of the PA and the organisation itself. Care should be taken that the top executive level team is neither too large: not more than 8, or too small: not less than 3, and that its members collectively operate for the benefit of the whole organisation rather than for the particular part which they are personally line manage. In other words, it should embrace responsibility for ensuring stakeholder engagement, partnership working and delivering

societal benefits alongside the more traditional responsibilities of achieving effective conservation.

6. *Re-considering the organisational structure*

Finally, there will be a need to reconsider the organisational structure, not necessarily with a view to changing for its own sake, but to determine whether it is fit for delivering the strategic re-orientation and the engagement of staff with a range of skills to cope with partnership working, stakeholder engagement and delivering societal benefit. There is no one solution to this. The guiding principle should be that the new skills and new approaches are effectively positioned in the structure, and neither given too great a prominence over other responsibilities, or side-lined as if they were of little significance.

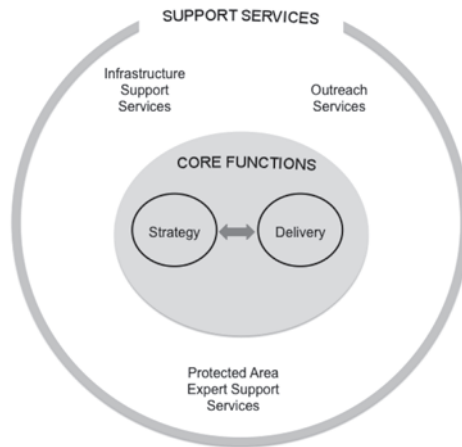


Figure 36: *Ideal structural model of a PA*

Source: Authors’ draft based on Croft (2010).

The ideal structural model is shown in Figure 36. It is not a structural diagram as there is no ideal structure. Managers should ensure that the key functions perform by the organisation distinguish between the ‘core functions’ and ‘support services’. The former are those that directly achieve the mission by developing the strategy and ensuring the ability to review performance, and delivering the strategy on the ground within the PA and in cooperation with the ‘communities of

interest'. Support services are those that ensure the organisation is operated as efficiently as possible:

- PA Expert Support Services are natural and social scientific expertise on all aspects of knowledge gathering, analysis, information provision for management of the PA and for dissemination to the public and community of interests;
- Infrastructure Support Services include information technology, information management, human resources, and financial management; and
- Outreach Services include partnership working, education and communication, commerce and business development, and fund raising.

Stakeholder involvement

From the discussion and advice above, the key points for ensuring that a PA organisation is capable of ensuring engagement of and with stakeholders are:

- (1) Change the strategy to recognise this additional dimension of the organisation's work,
- (2) Review the culture and ensure that changes in approach are developed with full staff involvement and ensure that they are articulated to all in the organisation and that they are implemented effectively, and
- (3) Change the governance structure to recognise the legitimacy of direct involvement of key stakeholders and change the executive structure to ensure that the new approaches are fully absorbed in the organisation's operation.

Regional development

For effective contribution to regional development, the organisation will also need to review its strategy, its approach to working, its skill set, and its governance. It will most of all need to re-orientate the way it does its business from a largely internal concentration on conservation to an approach embracing the ability to understand the needs of regional development, to be able to analyse the regional development plans and financial instruments, and to develop means for delivering greater benefits to the region beyond the boundaries of the PA.

3.4.2 Evaluating management effectiveness

Aims of evaluations of management effectiveness

Protected area management effectiveness is the degree to which protected area management protects biological and cultural resources, and achieves the goals and

objectives for which the protected area was established. Both researchers and practitioners alike have documented numerous problems with regards to management effectiveness in protected areas (Ervin, 2007). Some examples documented are that; 70 percent of tropical parks are affected by poaching, encroachment, logging, and a host of lesser threats (van Schaik et al. 1997); more than 90 percent of Russia's national parks have serious gaps in infrastructure, management planning, and staffing (Tyrlyshkin et al., 2003); and most of the 110 parks in South Africa's KwaZulu-Natal Province have major gaps in data collection, park layout and design, field equipment, and research (Goodman, 2003).

For anyone working in (and serious about) protected area management this is cause for much concern and needs to be addressed before the situation deteriorates any further. The assessment and evaluation of management effectiveness of a protected area is a very important step that goes a long way to achieving the goals of the protected area. As it is widely recognised that there is a need to improve the effectiveness of management of protected areas, this in turn has led to an increased interest in the development and application of monitoring and evaluation systems that address the broad issues of protected area management.

This concern for effective management in protected areas has been recognised by the CBD (Conservation on Biological Diversity) and in response to this, 188 countries signed (in 2004) a programme of work for protected areas aiming at the

- development and adoption of methods, standards, criteria and indicators for evaluating the effectiveness of protected area management and governance;
- establishment of management effectiveness databases to track status and trends;
- implementation of management effectiveness evaluations in at least 30 percent of protected areas within each country; and
- integration of the results of management effectiveness assessments into management planning and practice

The assessment of management effectiveness is also an important step in developing a protected area system master plan. Such assessments not only reveal management gaps in the protected area system but also guide protected area strategy and capacity development, enable adaptive management, guide effective resource allocation, reveal the scope, severity, prevalence, and distribution of an array of threats and pressures to the protected area, as well as the promotion of accountability and transparency among key stakeholders, and build support for the protected area management.

By carrying out protected area assessments such approach enables policymakers to refine their conservation strategies, re-allocate budget expenditures, and

develop strategic responses to the potential threats and weaknesses in management.

There are a number of different methodologies which vary considerably in their scale, depth, duration and data collection methods. To help harmonise these differences, the World Commission on Protected Areas (WCPA) published a global framework that guides the development of management effectiveness assessment methodologies (Leverington et al., 2008).

Management effectiveness methodologies

Protected area management effectiveness assessments have been conducted in over 75 countries worldwide. There are a number of different methodologies, and these vary considerably.

Table 6: The WCPA Management Effectiveness Evaluation Framework

Elements Of Evaluation	Explanation	Criteria That Are Assessed	Focus Of Evaluation
Context	Where are we now? Assessment of importance, threats and policy environment	<ul style="list-style-type: none"> - Significance - Threats - Vulnerability - National Context 	Status
Planning	Where do we want to be? Assessment of protected area design and planning	<ul style="list-style-type: none"> - Protected area legislation and policy - Protected area system design - Reserve design - Management planning 	Appropriateness
Inputs	What do we need? Assessment of resources needed to carry out management	<ul style="list-style-type: none"> - Resourcing of agency - Resourcing of site - Partners 	Resources
Processes	How do we go about it? Assessment of the way in which management is conducted	<ul style="list-style-type: none"> - Suitability of management processes 	Efficiency and appropriateness
Outputs	What were the results? Assessment of the implementation of management programmes and actions: delivery of products and services	<ul style="list-style-type: none"> - Results of management actions - Services and products 	Effectiveness
Outcomes	What did we achieve? Assessment of the outcomes and the extent to which they achieved objectives	<ul style="list-style-type: none"> - Impacts: effects of management in relation to objectives 	Effectiveness and appropriateness

Source: Hockings et al. (2000).

While any particular assessment methodology will have an array of indicators, the framework identifies the following elements for categorising these indicators:

- Context: protected area significance, threats and policy environment.
- Planning: protected area design and planning.

- Inputs: the resources needed to carry out protected area management.
- Processes: the way in which management is conducted.
- Outputs: the implementation of management programs, actions and services.
- Outcomes: the extent to which objectives have been achieved.

Management effectiveness assessments address at least one of three topics (cf. Ervin, 2003; Hockings et al., 2000):

- Design: whether the layout of the site or system is adequate for protecting the focal biodiversity features within it.
- Management: whether the systems and processes are adequate for the needs of the site.
- Ecological integrity: whether management is effective in maintaining biodiversity and abating key threats.

These different approaches to assessing protected area management effectiveness generally fall into four categories (Ervin, 2003; cf. also the recent publication by Nolte et al., 2010):

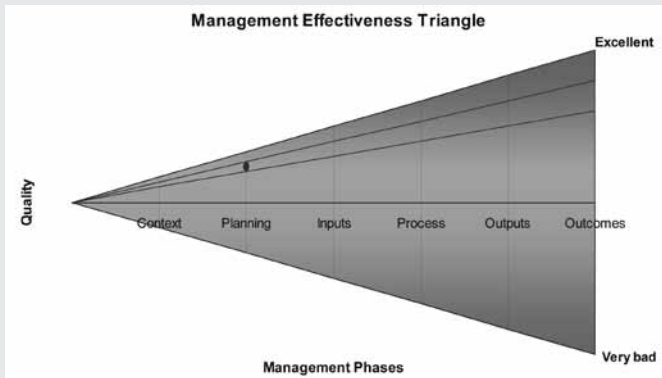
- An in-depth evidence-based approach using the results of monitoring and stakeholder surveys to assess the degree to which management actions have achieved management objectives. Such assessments typically involve the creation of a detailed baseline of key desired outcomes, and are designed to measure changes in these outcomes over time.
- A system-wide peer-based approach which includes most or all of the protected areas within a given system where participants assess a range of indicators related to key threats and critical management needs, typically in participatory workshops with peer review by protected area managers and others to reduce biases. The most frequently applied tool for this approach is the Rapid Assessment and Prioritization of Protected Area Management (RAP-PAM) methodology which has been applied in over 1,500 protected areas across 45 countries. The RAPPAM methodology includes over 100 indicators organized under the WCPA Framework. Another approach includes the “European Site Consolidation Scorecard” (see Box 22 and Box 23).
- A rapid scorecard-based approach uses a scorecard to elicit expert opinions about protected area management. Usually with a set of four or five pre-defined thresholds for each indicator. Such assessments can be very rapid, and require few resources to implement. An example for this kind of methods is the IPAM-toolbox (see details in chapter 2.3). The IPAM toolbox tries to assess the whole range of management activities by a set of pre-defined questions. The questions refer to 25 fields of activities (FoA), which can be identified along the whole life-cycle of a PA.

- A categorical assumption-based approach draws on available data and develops assumptions to determine potential management effectiveness. Usually there is little interaction with field staff to corroborate results, but there is often some review of the assumptions by administrative staff. This approach, which applies to an entire category of protected areas, should not be treated as equivalent to a more comprehensive assessment.

When choosing a methodology, planners should carefully consider the assessment purpose, the audience and available resources. In many cases, planners may want to adapt different elements from different approaches, and may want to apply different methodologies within those approaches.

Box 22: Rapid scorecard approach by the example of “Guidelines on evaluating the National Parks of Austria”

In the course of an Austrian study, a catalogue of criteria was developed from international comparisons and experiences gained during the evaluation of the Gesäuse National Park in Austria. The intention was to form the outline for future evaluations of the Austrian national parks. In a joint discussion process between the responsible Ministry, the according federal states of Austria and the Austrian national parks, the aim was to set up national and transparent standards for management evaluations. The operating expense should have a rational cost/benefit share. At the same time, the guideline should respect local preconditions. Thus, as a continuation of this, the national parks will compile individual evaluation methods in coordination with the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management and other responsible bodies. Conceptual basis of this study is formed by the framework concept on management effectiveness by the IUCN-WCPA (see Leverington et al., 2008; Pfleger et al., 2009). The figure below highlights the “management effectiveness triangle” describing the influence of the phases of the management cycle upon reaching the targets (Pfleger et al., 2009). Evaluations should be focused on early phases, as the possibilities to re-direct activities are much higher.



Box 23: European Site Consolidation Score Card

Pfleger (2009) has presented an adapted and partly newly developed management evaluation tool called “European Site Consolidation Score Card” which is based on the “Parks in Peril Site Consolidation Score Card”. The scorecard approach focuses on main processes and capacity, assesses the basic requirements for an effective management in a relative short time and has been used in Latin America and the Caribbean for many years. The scorecard uses in total 17 indicators with each indicator being divided into five levels, whereby at least level 4 should be reached.

After a critical review of results and methodology, recommendations for applying and improving this scorecard were developed.

Evaluations were carried out in the Thayatal (Austria) and Berchtesgaden (Germany) national parks by the management of the two Protected Areas as self-assessment. Additionally representatives of all relevant stakeholder groups were interviewed in accordance with the Site Consolidation Scorecard to check whether such a stakeholder involvement makes sense for this kind of methodology.

The results show that both national parks are in a good condition and only a few issues remain where action is necessary. More management aspects have to be improved in the Thayatal national park than in Berchtesgaden, but on the other hand they achieved a higher degree of “excellent” management. However, both lack a proper vision, appropriate goals and a comprehensive monitoring plan, which are all crucial issues for successful and effective management. Such a situation might be similar in other sites in Central Europe. People involved in management of Protected Areas should therefore place a high emphasis on these issues.

The evaluations demonstrated that the benefits of the scorecard evaluation increases immensely due to the stakeholder involvement. Therefore, participation should take place in every case. Moreover, this methodology is applicable for IUCN category II Protected Areas in Central Europe and other parts of the world with a similar context. It can probably be used for a large variety of different Protected Areas as long as there are a few personnel on site. The efforts are small enough and most Protected Areas possess the necessary resources to carry out the evaluation. Nevertheless the study illustrates that modifications and improvements are necessary to increase the applicability and usefulness of the methodology for Central Europe and in general. Based on these recommendations a ‘European version’ of the ‘Parks in Peril Site Consolidation Scorecard’ was developed which is available as a download at www.mpa.uni-klu.ac.at.

Management assessment and stakeholder involvement

As for assessing the effectiveness of management and the involvement of stakeholders one should first consider that the capacity to manage has many components and these include the system of governance, available resources and the support of the community. The measurement of these components is contextual, as what can be regarded as effective legislation in one country may be entirely inappropriate in another with different legal and social systems.



Figure 37: Participation in evaluating the management effectiveness of a national park by means of a time line

As is now quite well known, and with regards to planning and decision making, protected area management practices have moved towards the inclusion of local communities, neighbours, NGOs and other stakeholders which sometimes even includes a co-management approach. As such the emphasis on the participation process should also apply to the evaluation of management effectiveness. To date some of the methodologies that have been used to evaluate management effectiveness, either by or with the involvement of management and without external involvement, will need to develop processes or systems that involve a broader form of participation. There needs to be more scope for a variety of people to influence the contents and standards established through the evaluation.

In the participatory approach for the evaluation of the Gesäuse National Park (Austria) stakeholders were invited to bring up activities of the park management

they liked or disliked. The activities are documented in a timeline (Figure 37). This allows drawing a common picture on the development.

3.4.3 Financing and business planning

The performance of a PA is closely linked to the financial resources of the site. Basically, there are direct and indirect options which will optimise the financial situation. Increasingly, PAs have had to supplement public financing with other funding sources. A good mix of funding sources can widen the opportunities for a PA substantially. On the one hand, by developing adequate funding design and contributions strategies (as site-level, national-level mechanisms or international sources of assistance), opportunities for funding are greatly enhanced. On the other hand, market analysis, product and service design, and marketing are also contributing factors. Because it is based on more long-term considerations, a PA's budget is influenced by more complicated and indirect factors.

Global funding gaps call for new approaches

Biodiversity and funds are unequally distributed on our planet. A rough estimate of global expenditures suggests that USD 6.5 to 10 billion are currently spent on protected areas per year, most of it in the developed world (mainly in the frame of domestic government budgets and international donor assistance) although a large proportion of the world's biodiversity is located in tropical areas of developing countries.

Since the inception of the Convention on Biological Diversity (CBD) in 1992, the number of the world's protected areas doubled while (international) financing⁷ for biodiversity conservation only grew by 38% (Gutman & Davidson 2007). Various studies⁸ show that current spending on existing protected areas is grossly inadequate and stress the importance of international financing to secure the conservation of global biodiversity.

Research and decisions of national and international institutions - like CBD's Programme of Work on Protected Areas – call for more reliable information on the funding status of protected areas, for additional funds and for effective management of these funds on a site and system level.

⁷ Includes funding in the form of biodiversity-related aid from OECD members, GEF funds and World Bank loans and credits (Gutman and Davidson, 2007, 7).

⁸ Cf. Phillips, 2000; Emerton et al., 2006; Gutman and Davidson, 2007.

Protected areas on their way to financial sustainability

The concept of financial sustainability is more than just increasing the annual budgets of protected areas. It can be a tool to improve the core objective of a protected area, i.e. conservation management. According to IUCN (Emerton et al., 2006), financial sustainability is “the ability

- to secure sufficient, stable and long-term financial resources,
- and to allocate them in a timely manner and in an appropriate form,
- to cover the full costs of protected areas, and
- to ensure that protected areas are managed effectively and efficiently with respect to conservation and other objectives.”

Finances shall be factored into the protected area planning and management processes and financial tools such as business planning shall be employed. Financial sustainability therefore needs adequate sources (= supply side) and wise use (= demand side) of funds and is impossible without “strong and effective institutions for protected area management” (Emerton et al., 2006).

Business-oriented financial planning as a process

Sustainable financial planning is a working framework that includes interactive processes involving numerous stakeholders in order to create broad ownership across constituencies, systematise actions and attract a sufficient and stable resource base. It fosters entrepreneurial thinking among managers and administrators to run the protected area as a business making it ecologically, socially and financially sustainable.

Steps in the financial planning process include a financial (gap) analysis which lists current income sources and identifies funding needs according to the protected area management plan; the resulting financial gap is the basis for the next and most crucial step, the identification of feasible financing mechanisms. The financial plan condenses all previous analyses and formulates financial strategies and their implementation.

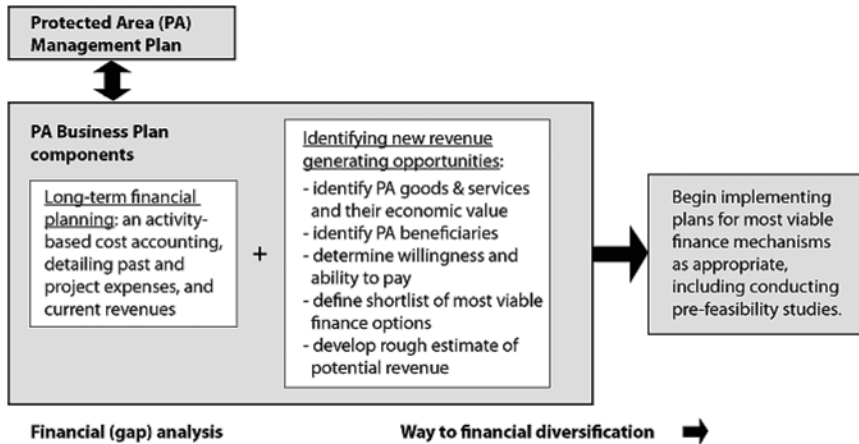


Figure 38: Parts of the financial planning process as defined in the Conservation Finance Guide

Source: Authors’ draft based on Conservation Finance Alliance.

Financial (gap) analysis

Funds needed depend on the type and extent of management action taken. PA managers need to prioritise measures in order to fulfil the conservation objectives according to the management plan and quantify the financial needs based on the past experience and projections taking into account cost effectiveness. The financial (gap) analysis is the baseline for all your efforts to increase and diversify the protected area financial portfolio.

The process of a financial (gap) analysis generally involves various stages (e.g. Flores et al., 2008):

- planning and preparation to define scope and methodologies;
- information collection involving stakeholders;
- processing and analysis of past and projected financial streams using different scenarios for future management action (e.g. mission critical and optimal state); and
- validation of results leading to a shared understanding of the funding gaps and the funding framework.

Ways to financial diversification

There is a universe of potential funding mechanisms for protected areas or biodiversity conservation. Figure 39 shows the broad range of potential funding instruments.

Local Level Financial Mechanisms	
More traditional <ul style="list-style-type: none"> - Protected areas entrance and fees - Tourism related incomes - Local markets for sustainable rural products - Local NGO and charities - Local businesses good will investments 	More innovative <ul style="list-style-type: none"> - Local markets for all type of ecosystem services (PES)
National Level Financial Mechanisms	
More traditional <ul style="list-style-type: none"> - Government budgetary allocations - National tourism - National NGO fundraising and fund granting - National businesses good will investments 	More innovative <ul style="list-style-type: none"> - Earmarking public revenues - Environmental tax reform - Reforming rural production subsidies - National level PES - Green lotteries - New good will fundraising instruments (internet based, rounds, up, etc) - Businesses/public/NGO partnerships - Businesses voluntary standards - National green markets - National markets for all type of ecosystem services (PES)
International Level Financial Mechanisms	
More traditional <ul style="list-style-type: none"> - Bilateral aid - Multilateral aid - Debt-for Nature-Swaps - Development banks and agencies - GEF - International NGOs fundraising and fund granting - International foundations - International tourism - International businesses good will investments 	More innovative <ul style="list-style-type: none"> - Long term ODA commitments - Environment related taxes - Other international taxes - Reforms in the international monetary system - Green lotteries - New good will fundraising instruments (internet based, rounds, up, etc) - Businesses/public/NGO partnerships - Businesses voluntary standards - International green markets - International markets for all type of ecosystem services (PES)

Figure 39: Overview of financial mechanisms for biodiversity conservation

Source: Gutman and Davidson, 2007.

PES = Payment for Ecosystem Services; ODA = Official Development Aid; GEF = Global Environmental Facility.

In order to identify and assess feasible financing mechanisms for a specific protected area (system), it is necessary to understand the assets and ecosystem services provided by the PA. At best there is already an economic valuation of the use and non-use values in the protected area.

On the way to diversify the funding portfolio the following actions should be considered:

- Identification and evaluation of benefits of the protected area;
- definition of the products and services (public and private goods components) offered;
- assignment of customers/markets to these products and services;
- assessment of their willingness and ability to pay;
- overview of potential financial mechanisms resulting from the above analysis;
- feasibility assessment for the shortlisted mechanisms; and
- selection and implementation of the chosen funding instruments.

Generally, PAs will depend mostly on public funds (from various local, regional, national or international sources) such as public coverage of management costs, ear-marked funds, coverage of project costs, or funding from international institutions. As PAs produce various public goods and services (biodiversity conservation, scientific research, and recreation), the scope of private funding is commonly limited (Getzner and Müller, 2007). Furthermore, private funding (e.g. sponsoring, merchandising, local products) especially need efforts in terms of time and money to be effective. Therefore, the costs and benefits of private funding programmes have to be taken into account before starting such venture.

Business planning

In the corporate world business planning is an exercise of strategic management in which the potential economic success of a business idea is assessed. It leads to the production of a document, the business plan. It is characterised by a succinct and well-structured form of presentation and its comprehensive information content. It serves internal (adaptive management) and external (communication, finance) functions. Business planning for protected areas is less standardised due to different enabling environments and methodological approaches, growing but limited good practice, varying terminology and few guidelines and tools. Rich experience in business planning for protected areas can be found in the U.S. where it helped decision makers to realistically assess funding needs as highlighted in this statement: “I am grateful to the National Parks Conservation Association and to Friends of Acadia for helping to develop this important business plan, which gives Congress a clearer sense of Acadia’s true funding needs [...]. This business

plan lays out the goals toward which we must strive, and will provide the type of concrete evidence and information Senator Collins and I need as we encourage appropriators to provide additional funding in the future” (Snowe, 2002, at www.npca.org).

The financial plan as discussed above forms part of a business plan document. For a protected area, this document could contain the following components:

1. Executive summary.
2. Protected area at a glance: short description of geography, size, zoning, natural asset base, management categories, rights and ownership.
3. Organisational information: areas of operation, organisational structure, management, employees, legal form, decision-making.
4. “Products and services” (findings as of financial analysis process).
5. “Business environment”: protected area system, legal and regulatory framework, stakeholders, marketplace, customers, competition, socio-economics of area.
6. Strategy & implementation: from vision to action plan (describing also scenarios, if used in financial analysis process), marketing.
7. Financials: historic and pro-forma numbers and assumptions (based on financial gap analysis and new financing instruments).

Financial planning and participation

There is a “paradox in current society’s awareness of biodiversity issues. On the one hand, media is full of messages and images regarding the plight of the environment and its charismatic species [...]. On the other hand, the public knows very little about what it would take to conserve biodiversity” (Gutman and Davidson, 2007, 48).

Planning for sustainably financed protected areas is complex, needs time and adequate (human and financial) resources, and above all the commitment of government and relevant authorities (later also stakeholders). Although it is a core competence of management and decision-making bodies within the protected area, it generates a “learning” dynamic for the larger group of involved people with regards to economic values of goods and services provided by protected areas and their real funding needs. It can increase public awareness finally leading to a higher willingness to pay of biodiversity conservation.

Regional development and benefit sharing

Financial planning unveils the beneficiaries of and contributors to conservation (“winners”, “losers”) and by structuring of tailor-made financial mechanisms

allow for the distribution of the costs and benefits. A lot of the funding instruments are targeted not only to the site level but rather to the system level of protected areas like government budget allocations, environmental tax reforms, earmarked international donor assistance and philanthropy, international markets for ecosystem services etc. Such instruments generally focus beyond financing the protected area but rather improving economic development in the region with the protected area being an important player in the region.

Box 24: Tools and best practice for financial planning of protected areas

US National Parks Business Plan Initiative

In 1998, National Parks Conservation Association (NPCA) partnered with the National Park Service (NPS) to launch the National Parks Business Plan Initiative (BPI), which paired MBA students from the country's top business schools with NPS park managers and staffs to assess existing management procedures and devise business plans to improve the short and long-term management of financial resources within each park. In 2002, this successful program was spun off and is now operated solely by the National Park Service.

Building on the knowledge and insight gained through our work with the BPI program, NPCA formally established the Centre for Park Management in 2002. CPM's work focuses on developing and executing programs to improve field managers' understanding and use of organizational, operational and financial management tools for the long-term benefit of both park resources and visitors. CPM is a proponent for management excellence in the NPS. Our role is to act as an agent of change for NPS management practices. Better managed parks are better protected parks, as savings - in both dollars and time - are used for resource protection, education, and interpretation (www.npca.org/cpm/; www.nps.gov).

Business-Oriented Financial Planning for National Systems of Protected Areas

Guidebook with lots of examples on financial planning processes and results by The Nature Conservancy strongly referring to its experience in the protected areas systems in the Americas (Flores et al., 2008).

Financial Sustainability Scorecard

Framework and guidelines targeted at governments to improve their understanding and development of the protected areas system funding by using a scorecard evaluation technique developed by UNDP (Bovarnick, 2008).

A trend towards the commoditisation of biodiversity assets, liberalisation of capital markets, privatisation and globalisation may also have impacts on local protected areas. There is a need for local ownership, effectiveness, transparency,

accountability and customer-mindedness if protected areas are to become financially sustainable in the long run. The financing and use of resources may be of eminent importance to regional (economic) development. As a PA can be considered a major local and regional project also in economic terms (e.g. number of jobs created), the PA management can influence regional development by

- purchasing goods and services from local companies;
- setting up networks and partnerships with commercial stakeholders; and
- contributing to the development of regional marketing and destination management.

Furthermore, the PA may also influence decisions on how resources are financed, e.g. by ear-marked taxes and charges for certain (specific) user groups. See Box 24 for an overview of a range of initiatives and tools for business-oriented financial planning in protected areas.

3.4.4 Impact assessment

Generally spoken, protected areas are established to prevent inappropriate land use which might harm nature with associated ecosystem services and cultural values (cf. PA definition in chapter 2.1). This concept has during the last years been challenged by the pro-active approach of EU frameworks (FFH and Birds Directives). Nevertheless, it is essential to predict and limit any impact on the site or – at least – to compensate for the effects of “unavoidable” damage. Depending on the park’s category and legislation, technical projects or changes in land use must be approved by a public authority. In this procedure, “Impact Assessment” (IA) plays an important role.

Box 25: Environmental Impact Assessment

Environmental Impact Assessment is the process of identifying, predicting, evaluating and mitigating the biophysical, social or other relevant effects of development proposals prior to major decisions being taken and commitments made. Strategic Environmental Assessment is generally understood as an impact assessment process that aims to mainstream environmental, social, economic, and health issues and ensure the sustainability of strategic decisions (IAIA, 2009).

The oldest, most well-established aspect of impact assessment is the “Environmental Impact Assessment” (EIA). Some systems constrain EIA to the analysis of impacts on the biophysical environment while others include the social and economic impacts of development proposals. The need to apply IA to strategic levels of decision-making (e.g. policies, legislation or programmes) led to the development of “Strategic Environmental Assessments” (SEA). As conflicts within and

between (public and private) interests may become quite emotional, clear, transparent and repeatable evaluation procedures are required for all impact assessments (see Box 25).

Generally, impact assessments (see for the following IAIA, 2009) aim to

- provide clear, technical information for decision-making;
- promote transparency and participation of the public in decision-making;
- identify procedures and methods for the follow-up in policy, planning and project cycles (monitoring and mitigation of adverse consequences);
- check and compare alternatives; and finally
- contribute to an environmentally sound and sustainable development.

However, impact assessment is not only about assessing the potential damage for ecosystems. Even the establishment of a protected area can be subject to an impact assessment. Within its “Environmental Impact Assessment Programme” (www.pc.gc.ca), Parks Canada, the umbrella organisation of the Canadian protected areas, is committed to assess the potential impacts of all its policies, plans and projects. Prior to the expansion of Nahanni National Park Reserve in June 2009, for example, a strategic environmental assessment has been conducted. It concluded that the expansion will ensure the continuation of natural processes by reducing the impacts of minerals exploitation and commercial big-game hunting.

Meanwhile impact assessments are also an important tool to integrate environmental and social standards into development cooperation. Most multi-lateral development banks have developed EIA systems (IAIA 2009). In 2009, sixty-six financial institutions have adopted the Equator Principles (www.equator-principles.com), a benchmark to ensure that major projects financed by these institutions are developed in a manner that is socially responsible and reflects sound environmental management practices.

Legal basis for environmental impact assessment in Europe

At present, EIA is a requirement in most countries of the world (IAIA, 2009) for projects and policies of a certain scope. The European Union approved Directive 85/337/EEC on EIA (ec.europa.eu) already in 1985 with the objective to prevent significant effects on the environment (precautionary principle) (Figure 40). A European solution was aspired to harmonise the unequal conditions for the authorisation of constructions within Europe which so far led to a distortion of competition between the different countries. According to this law, an EIA has to be carried out if technical constructions or major interventions in the landscape are planned. Human and ecosystem health, biodiversity, soil, water, climate, landscape as well as cultural goods form an integral part of the administrative proce-

procedure approving, prohibiting or modifying a certain project in order to minimise (potential) damages.

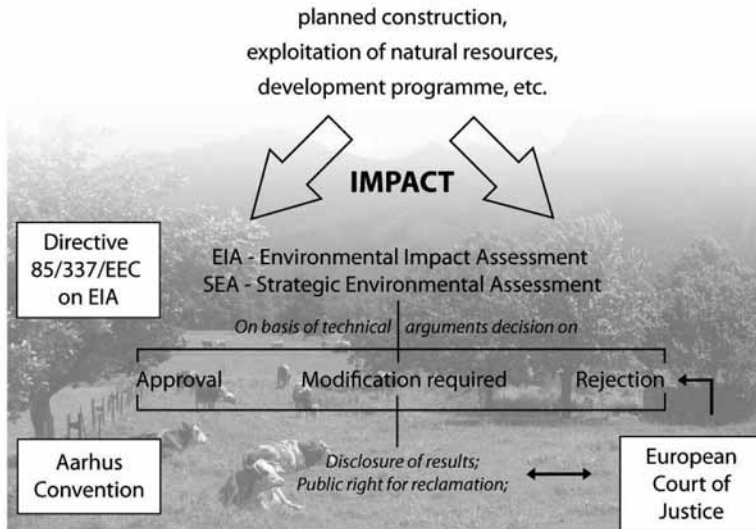


Figure 40: Environmental Assessment procedure in Europe

Source: Authors' draft based on European Union, Directive 85/337/EEC on EIA (ec.europa.eu).

The authority responsible for the planned project has to prepare the relevant material for the assessment, which means providing descriptions of

- the planned undertaking and the associated measures to minimise or avoid negative impacts on the environment;
- the potential impacts which cannot be avoided; and
- potential alternatives to the projects (e.g. alternative routes for a new road).

In case of expected negative impacts on the environment which cannot be avoided, compensation measures have to be implemented (e.g. if a wetland was destroyed by a road construction another wetland has to be established, enlarged or protected), or the project or policy has to be omitted.

Limitations of EIA in protected areas

Ideally, impact assessment studies should prevent major deterioration of natural ecosystems – in general, but in particular within legally protected areas. However, this ambitious goal is not always met as the example presented in Box 26 (taken from WWF; www.panda.org) shows.

Box 26: Impact assessment and conflicts between development options

Plans for new skiing areas in the Carpathian Mountains and the Balkans threaten protected areas that house some of Europe's last remaining untouched wilderness. New developments and expansion plans for existing facilities for downhill skiing are under way across many parts of the region, particularly in Romania, Bulgaria, Slovakia and Ukraine. In theory, Environmental Impact Assessment should provide the right framework to evaluate potential effects on nature and identify measures to mitigate negative impacts. In practice, however, these provisions are of limited use. In the light of intense pressure from economic and political forces, nature conservation often gets the short end of the stick.

For example, Bansko, in the heart of Pirin National Park in Bulgaria, is a popular ski destination that has become infamous for being the first of a series of illegal ski developments in Bulgarian protected areas. The project received approval from authorities in 2000 and was built in subsequent years. Half of the ski runs in Bansko have no environmental permits, while those which do have permits have violated each requirement of the EIA decision (e.g. instead of the permitted 30 metres the ski runs actually are 60 to 100 metres wide). The European Commission has initiated penalty procedures against Bulgaria because of violations of environmental law in the case of Bansko. The development has caused significant environmental problems, including landslides in Pirin National Park, but has also had social and economic implications. Bansko was once a popular summer resort, but visitor numbers have dropped in recent years due to higher prices and overdevelopment of the once picturesque town. Nevertheless, earlier in 2009 the Consultative Council of Pirin National Park submitted to the Ministry of the Environment a proposal to alter the park management plan in order to permit the construction of two new ski zones inside the park. The same pressing problem exists in Slovakia where authorities have opened Tatra National Park to ski development – a marked change as the area has been relatively strictly protected for the past thirty years.

Stakeholder involvement in EIA

Since the Aarhus-Convention (www.unece.org) was adopted in 1998, access to information and justice in environmental matters as well as participation in decision-making is a public right. Henceforth, the respective administrative body has to present all materials available on a planned project (e.g. intended measures, justification for carrying out an EIA, results of the EIA and respective recommendations) to the concerned public who, within a given time frame, has the right to comment on the procedure or to take legal actions against the decisions (e.g. complaints at the European Court of Justice, see Figure 40). Especially, NGOs often make use of their right to enter objections in order to prevent projects which may harm the environment (e.g. BirdLife International commented on the European Investment Bank Statement of Environmental and Social Principles and Standards (www.eib.europa.eu); Bulgarian NGOs commented on their country's new Operational Transport Programme (bankwatch.org)).

Influence on regional development

Impact assessment studies generate the technical arguments for the approval, modification or rejection of a planned transaction which means that their results have a strong influence on regional development decisions. This can be demonstrated by the example of the establishment of Tortugas Ecological Reserve in Florida, USA (see Box 27).

Box 27: Impact assessment in Tortugas Ecological Reserve (USA)

The Tortugas Ecological Reserve should have been set up to protect the marine environment from further degradation caused by an increase in population and tourism in the Florida Keys. However before its establishment in 2001, the socio-economic impact of a fishing ban within the reserve was assessed. Fishermen, charter boat captains, marina operators, and scientists were consulted to determine what areas are fished, which fish are found in those areas, and how much the fish are worth. Demographics of the fishermen were also recorded. This information was used to determine ideal no-take zones, minimising the economic losses for the fishing community. By displaying the data in a GIS, the information was presented to the public which was encouraged to comment on alternative zoning schemes. More than 4,000 responses were received, of which almost 3,000 expressed a general support for the creation of a strict reserve with a fishing ban (NOAA, 2000). This social impact assessment combined with the involvement of the fishermen in the decision-making process helped to build trust and to gain their support for long-term resource management in the region (www.csc.noaa.gov).

3.4.5 Data and information management

Protected areas (PA) are often overwhelmed with data and information, but often lack the capacity to handle, interpret and learn from this amount of data. A rigorous data and information management system therefore help to control and disseminate information and data relevant to the PA. This involves the whole life-cycle of the PA from clarifying requirements to collecting data and finally using and storing it. Because of the different sources, varying quality, availability and form of data (e.g. digital, analogue), a comprehensive management system requires sub-systems with the ability to administrate different kinds of information appropriately. Each PA basically develops its own information system designed specifically to address the issues with which it is concerned (e.g. ecosystems, socio-economics, politics and local community issues, stakeholders, administration matters). The structure of the data management system should be closely linked to research requirements and the administrative procedures in the PA.

To build up a data and information system, the preparation of an adequate electronic data processing (EDP) and sufficient computer support for a PA manager’s administrative and managerial activities is essential. A comprehensive overview of data and materials that concern a PA should be provided in a meta-data catalogue. Finally, a PA may link to a range of networks which update digital information (aerial photography, cadastre maps, relevant geo-information, databases) by data interfaces. In general, it is recommendable to use open-source applications because there is no dependency on a single provider and there is the possibility to change. On the other hand, it has to be secured that data exchange with systems outside (e.g. other PAs) is feasible based on common file standards.

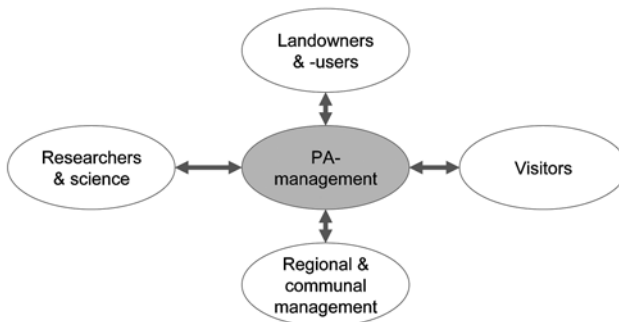


Figure 41: Information flows between a protected area and its stakeholder groups

Source: Kirchmeir et al., 2008.

The data and information technologies aim to support the PA management to exchange information and data between the different stakeholder groups. The PA management should be a platform or network node that manages all information flows (Figure 41).

The most important tool for data and information management in PAs is the Internet (World Wide Web), including websites, online databases, WEB-GIS applications and new services, such as RSS-Feeds (Really Simple Syndication, i.e. standardized format for publishing updates on websites, such as blog entries, news headlines that users can subscribe to) and “smart phone” applications (small software programmes for smart phones, a combination of mobile phones and Personal Digital Assistants (PDA) that work like an electronic organizer). Especially if a large number of people are concerned, the use of modern information technologies is necessary. For instance, if there is a broad participation process planned, it is possible to use online inquiries for the different stakeholder groups.

Box 28: HABITALP – development of a standardized interpretation key for the delimitation for land use types in alpine protected areas

The HABITALP project is a cooperation between 11 PAs in five nations in the Alps. Berchtesgaden National Park (Germany) is the leader of the project. The aim of HABITAT is to develop a standardized interpretation key for the standardized delimitation for land use types in alpine protected areas. The interpretation key is based on an already existing hierarchical code, which will be extended to include the characteristic alpine landscape types of the project partners. Modern methods of interpreting aerial photographs as well as of analyzing digital space referred data have been successfully applied for many years in Berchtesgaden National Park. Within the frame of the HABITALP project they will be transferred to 10 other regions which belong to the Alpine Network of Protected Areas (AlParc). Building on this, the participating protected areas relate the land use areas determined through aerial photographs with corresponding FFH (EU’s flora-fauna-habitat directive) types and develop a method for long term monitoring of these areas. A common transnational database with harmonized land use data will be accessible over a geographical information system for all project partners. This space-referred database will be a basis for numerous analyses on landscape structure and diversity as well as their changes over long time periods. Data on landscape scale can be refined by local data on a more detailed scale, like for example vegetation surveys (www.habitalp.org).

Box 29: Visitor information on the spot by aid of technical solutions (Gesäuse National Park)

The Gesäuse National Park (Austria) developed right from the start in 2003 a comprehensive visitor information concept supported by technical solutions. The new methods of visitor information shall be seen in addition and not as a substitute of traditional methods (analogue information material). The National Park emphasises the information transfer through interactive and playful technical solutions. A new target group – younger people – shall be addressed who are usually not reached by the traditional information transfer. The new technique should touch as many senses as possible. Therefore, the Gesäuse National Park implemented the following:

- *Interactive geology exhibition with audio guide:* The “Understand the landscape of Gesäuse” exhibition brings visitors far back to the age of formation of limestone. A virtual national park guide routes the visitor through the eight stations. It gives lessons to be solved interactively, and it explains demonstratively the formation of today’s landscape. The virtual national park guide is implemented by video sequences.
- *Virtual 3D flight:* In the national park centre, a virtual and interactive flight through the national park area, the hinterland included, is offered to visitors. Behind many points on the screen, marked with small flags, additional information (photos, texts or videos) is presented. The information is available in German and in English language. It is also possible to project marked paths onto a non-digital midget relief. So there is a model of the landscape on the one hand in digital form, and on the other hand in “real” midget-form. The midget-relief can also be examined by beam spots; they are projected onto the relief. The visitor can move another mobile beam spot onto a fixed beam spot. When two beam spots are congruent the visitor receives information, for example photos, texts or videos.
- *Microscope with an implemented beamer:* Microorganisms can be projected in enormous extent onto a wall and thus can be examined much better. So the problems especially by children to use normal microscopes can be prevented.
- *Mobile digital device for presentation:* works like normal slide projectors, but you can include videos and music, for example. The device is quite small for transportation.
- *Video player with 16 videos:* the visitor can choose the video. The handling is very easy, so it is also suitable for people without any technical skills.

More information can be found at www.nationalpark.co.at.

The risk of using modern technologies is that certain stakeholder groups that are not technically adept or have no internet access are excluded. Also the error rate rises if the complexity of technical infrastructures increases, what can discourage stakeholder not to use it.

Another important field of application in PAs is data collection and analysis in science (e.g. remote sensing, animal voice recorder). Mostly this section is not managed directly by the board but the research department.

Box 28 and Box 29 present best-practice examples of the use of new information technologies in protected areas.

Stakeholder involvement

Data and information management has a strong influence on stakeholders. Protected areas often have a rich and comprehensive database which is, however, not necessarily open to the public. By using information technologies the existing data can be distributed easily, and communication is faster. For example, virtual meetings and online discussions are possible. Although new technologies can not replace traditional forms of interaction, they can be considered as additional benefits and opportunities for new forms of communication and information exchange.

Regional development

Concerning regional development, PA managers can use data and information technologies to support local businesses. For example, information management services are usually very complex and demand specialists. Thus, external technical support may be commissioned to region companies. In particular in remote areas, these highly qualified jobs are an opportunity to attract specialists and new businesses to the region.

3.4.6 Research setting and monitoring

Managers have to constantly broaden their knowledge about their protected area and its specific regional features. They are also obliged to monitor the success or failure of their conservation measures. Hence, research and monitoring are crucial issues for all protected area managers. However the effort has to be kept feasible and affordable.

Most research related to protected areas is funded by external sources and executed by different research institutions. The results are primarily distributed amongst the scientific community. Apart from self-funded research, the park management has little influence upon these activities. However, a clear research

and monitoring concept as well as rules of action may help to attract and steer research activities in the area. A balanced composition of commissioned research and "stimulated" external research activities may create enormous synergies. For example, to stimulate applicable research, Prealpi Giulie Regional Nature Park (Italy) launched a competition for research activities carried out within the boundaries of the protected area in 2009. The most interesting and innovative piece of work is awarded with a prize amounting to EUR 2,500.

For strategically planning research and monitoring activities it is recommended to

- prepare an overview on the kind of research already existing in the protected area (fields and types of surveys), to compile the information in a data base and to draft a research profile;
- jointly identify knowledge gaps and formulate research questions as well as monitoring needs for the park;
- search for synergies (e.g. cooperation with research institutions and international programmes) and additional funding potentials;
- define principles for research carried out in the park (e.g. applicability of the results) and to agree on a code of conduct for handling the information (e.g. storage of data, target oriented communication of results);
- set up a long term monitoring programme which is indicative, feasible and linked to the primary objectives of the PA.

Scientific research in protected areas

Scientific research should be facilitated by all protected areas, however in particular by strict nature reserves, IUCN Cat. I (Dudley, 2008), and biosphere reserves which are considered being "learning sites for sustainable development" (UNESCO, 2008).

Unfortunately, there is no central gathering place for research carried out in (European) parks. However, most recent new initiatives collecting scientific results from surveys in protected areas include the following.

- In the framework of the Master of Science Programme "Management of Protected Areas" at Klagenfurt University, Austria, the series "Improving Protected Areas" was launched. It provides an overview on the results of the scientific studies carried out by the students at the end of the programme.
- Since 2009, the journal "eco.mont – Journal on Protected Area Mountain Research" presents results from research activities performed in protected areas in the Alps (and other mountainous regions in Europe or worldwide) (www.oeaw.ac.at/ecomont).

- Regularly, the Hohe Tauern National Park, Austria, organises the “International Symposium on Research in Protected Areas”. The last one took place in September 2009 and attracted more than 170 scientists from 12 countries (www.alparc.org).
- Several international scientific journals, of course, include numerous articles and papers of interest to PA managers, such as Biodiversity Conservation, Journal of Environmental Management, Ecological Economics, Journal of Sustainable Development. However, the journals may not be easily accessible for lay-persons, but can usually be searched for at university libraries.

Box 30: Research in the Rhön Biosphere Reserve (Germany)

Alongside with conservation and sustainable development, research is one of the main scopes of duties in UNESCO biosphere reserves. In the Rhön Biosphere Reserve, stretching across three Federal States in Germany, a research master plan was developed together with some criteria for research carried out in the protected area. For example, research has to be interdisciplinary, use-oriented and referenced to all three Federal States involved. Concrete research issues which are of great interest for the management have been compiled in a list which is available on the web site, serving as “market place” between management and scientists in search for an appropriate topic. Further, cooperation has been developed between the biosphere reserve and the Technical College of Fulda. Jointly, the “Scientific Collection Rhön” was established. Once a year, an edition of the series “Contributions to Region and Sustainability” is published, displaying scientific results achieved in the region.

“What has changed since the biosphere reserve was established?”, “Are we on the right track?”, such questions were answered by the first integrated environmental report, which was compiled for the Rhön Biosphere Reserve 17 years after its nomination (BayStMUGV et al., 2008). Information collected in the particular monitoring programmes of the Federal States was harmonised and used to display complex issues such as the development of biodiversity or acidification in the region. Besides, socio-economic data (population, traffic, land use) were integrated. Amongst other issues, the report revealed, that

- the decline in population and job offers could not be halted,
- the trend towards less and shorter holidays in the region could not be turned back,
- the land use forms tend to be less divers (due to larger unities),
- the areas with organic agriculture and semi-natural forests increased, and that
- extensive land use measures had positive impacts on the abundance of rare species.

Monitoring in protected areas

Monitoring is based upon long-term considerations and involves making observations with sufficient precision to determine whether a required condition is being met. It therefore includes both (1) evaluation-related (conservation status of a certain flagship species in the park) and (2) research-related components (e.g. monitoring of climate change effects).

(1) Due to global warming effects, ecosystems in protected areas will be subjects to changes in the following decades. New challenges arise to ensure the survival of certain species or habitats. Scientists from the Potsdam Institute for Climate Impact Research, for instance, investigated the expected climate change scenarios in over 4,000 German Natura 2000 sites. The results of the study are displayed in the internet (www.pik-potsdam.de). They can be used by protected area managers to check whether the respective conservation goals can still be achieved in the near future and which measures have to be taken to prevent losses of vulnerable species.

(2) The Global Observation Research Initiative in Alpine environments (GLO-RIA) is an example for an effort to monitor global change effects on species composition. It aims at establishing and maintaining a world-wide long-term observation network in alpine environments. At GLORIA sites, vegetation data are collected in a standardised procedure. They are used for identifying trends in species diversity and composition under accelerating climate change pressures. The strength of GLORIA is its simple approach which allows for the establishment of a large number of sites within and across continents. This requires a world-wide community of committed ecologists who set up long-term monitoring programmes which will yield results for future generations.

Stakeholder involvement in research and monitoring

Research is carried out by scientists. However, stakeholders may also play a significant role. Many scientists are said to work in their ivory tower, and use their own technical terminology and publish their results in high ranking journals. For the practitioners and the public in the parks, research activities often appear being pure luxury rather than valuable sources for information and advice. By involving stakeholders mutual acceptance and learning can be achieved, beginning with (1) the joint development of research questions, (2) the direct participation in surveys to the point of (3) communicating the results to target groups.

(1) In 2005, stakeholders of Great Walsertal Biosphere Reserve (Austria) were invited to three workshops to commonly develop guidelines for research and monitoring in the park. Thereby, research questions of practical relevance for the region were agreed on.

(2) Since 1999, the geographical journal GEO celebrates its “Day of Biodiversity” which takes place every year, on the second Saturday in June (www.geo.de). All people interested in nature are invited to participate and to discover the variety of plant and animal species in a piece of land (which can be a garden, a meadow, a forest, etc.). In 2009, the motto was “Biodiversity in Protected Areas”; about 25,000 people participated, from renowned experts to school kids. The activities contribute to the documentation of species abundance and raise awareness for the diversity and beauty of the local fauna and flora.

(3) The role of the scientific community as technical advisers for policy makers in complex issues is more and more appreciated. The Intergovernmental Panel on Climate Change (IPCC; www.ipcc.ch), for instance, was established in 1988 by the United Nations Environment Programme (UNEP) to provide the world with a clear scientific view on the current state of climate change and its potential environmental and socio-economic consequences. Each IPCC assessment has a summary for policymakers, which is widely distributed. In contrast, the Economics of Ecosystems and Biodiversity (TEEB) study is a major international initiative to draw attention to the global economic benefits of biodiversity, to highlight the growing costs of biodiversity loss and ecosystem degradation, and to draw together expertise from the fields of science, economics and policy to enable practical actions moving forward (www.teebweb.org). In 2009, different reports were released for different target groups such as policymakers, the business community and the consumer audience (citizens). These global initiatives could be exemplary for individual protected areas as they also might benefit from establishing a scientific body which dedicates itself to communicate relevant technical knowledge to selected stakeholder groups.

Regional development

Research and monitoring may influence regional development either directly or indirectly. For example, the construction of the research station “Fundación Científica San Francisco” (Figure 42) in the Andean cloud forests at the fringes of Podocarpus National Park (Ecuador), had direct impacts on the development of the region. When the German Research Foundation (DFG) started a scientific programme at the station in 1997 (which is still running), several foreign scientists came to this rural area time and again. A new bus stop was established to serve the station. Several people from the region were contracted to work as drivers, guardians, cooks or research assistants. Even the range of goods in the local supermarket changed, as before there was almost no demand for red wine – which changed with the arrival of the German scientists. Currently, the findings from scientific surveys on tree regeneration indirectly affect the land use in the area as the results

shall be applied in a local reforestation project in cooperation with the municipality of Loja.

Moreover, regional development schemes often use scientific information on risk assessment for natural hazards and constrain the establishment of settlements in high risk areas (e.g. alongside a river or close to steep mountains).



Figure 42: Research station at the fringes of Podocarpus National Park influences the development of this rural region in Southern Ecuador

3.4.7 Development of Protected Area's region

No PA is an island. It interfaces with the areas around (e.g. material flows, immissions, migratory species) and is both a limiting and supporting part of the regional economy. As a permanent process, the PA management is often supposed to promote the sustainable development of the PA's region. To this end, developing a PA's region means adjusting or developing strategies, policies, programmes and guidelines with a focus upon social, economic and ecological sustainability. There are different ways of achieving these aims, ranging from public relations activities, the building of partnerships, to compensation payments for drawbacks and incentive-oriented measures.

Protected areas need to match the interfaces between the surrounding areas and regions and themselves to minimise negative impacts and to imbed the protected area into buffer zones and corridors that are managed by following the requirements of sustainable development (see IPAM toolbox at www.ipam.info):

- promoting the region and the protected area;

- supporting the region;
- serving as an example in the implementation of activities that contribute to economic and rural development;
- the integration of cultural, social and educational aspects into the region's development;
- support with the empowerment of regional institutions and personalities; and
- transfer of knowledge, motivation and capacity building within the region.

Conflicts between protected area management and local economic development are intensifying in many parts of the world, demanding new approaches to protecting biodiversity as well as taking into account the rights of people who live in and around these protected areas (Munasinghe and McNeely, 1994). New approaches to linking protected areas to the surrounding lands are required if the appropriate benefits are to flow to society, involving a wide range of government and private institutions in managing natural areas of various management categories (McNeely et al., 1990).

Box 31: Tanzania Community Conservation Service

In 1988, Tanzania National Parks (TANAPA) implemented the "Community Conservation Service" (see www.tanzaniaparks.com) to better involve local communities in park management. Each national park introduced a community liaison officer, whose job it is to exchange knowledge, develop mutual trust and represent the communities' interests in management planning (Eagles et al., 2002). Beyond that, in 1992, the "Support for Community Initiated Projects" (SCIP) fund was established as part of the strategic planning process. The SCIP program works with communities bordering or close to national parks and provides funds (acquired from tourism in the park) to cover community needs (e.g. local school education projects or repair of community facilities). Generally the park contributes up to 70 per cent of the project cost and the community contributes the remaining 30 per cent. Prior to project implementation, a Memorandum of Understanding has to be signed between community, park and district authorities. In Tarangire National Park, this modest investment of manpower and funds led to a significant change in attitudes towards the park: hostility and enmity gave way to dialogue and cooperation (Kangwana and Mako, 1998).

Box 32: Protecting Biodiversity and enhancing regional development at the same time – a good practice collection from the Alpine range

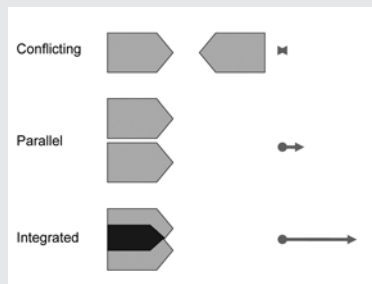
A study in the frame of the Future in the Alps Project (comissioned by the International Commission for the Protection of the Alps – CIPRA, and financed by the MAVA Foundation for Nature Conservation), the relevance of sustainable development by PA management activities and projects has been evaluated (Jungmeier et al., 2006). The tasks were to

- explore how protected areas contribute to regional development; and
- analyse the benefits of large-scale protected areas and their networking in preserving biodiversity.

By collecting and analysing examples of good practice, the conditions under which protected areas can contribute to regional value added were highlighted. Following conclusions can be drawn:

- A new understanding of the role of protected areas can be detected. In many recent materials and examples, protected areas are seen as supportive tools for regional development and vice versa.
- There are only few projects and management activities existing, that have an integrated approach: protecting biodiversity and enhancing regional development at the same time. Most projects are set up to support either the one or the other segment, some are even conflicting.
- There are sufficient methods available to predict, evaluate or at least estimate the impacts protected areas and their activities have on regional development. However, not one of these approaches is standardised or well established. Also the data and information available differs from region to region.

The figure below indicates possible relationships between biodiversity conservation and regional development.



It is now recognised and understood that the very survival of the protected area will depend on the development in the region. The close link between rural devel-

opment and conservation demonstrates that action in either area alone will not solve the regions development needs. Integrated action in the region on the part of protected areas may require some changes in developing strategies, policies, programmes and guidelines with a focus on social, economic and ecological sustainable policies, and these might include

- promotion of cross-sector collaboration;
- the sharing of information with various institutions;
- developing agreed common objectives, and seeking to define problems in a similar way;
- a clear quantification of the many economic and financial benefits of integrating rural development, linked with the conservation of the biological resources;
- institutional reform and improvement which may be required as a part of the good design and implementation of integrated sectorial development plans and programmes;
- new legislation may need to be formulated in agreement with the socio-economic patterns of the target group of people or institutions and the natural resource needs, both to institute disincentives and to insure that incentives carry the power of law;
- policies and legislation in other sectors may need to be reviewed for possible application to conservation of biological resources and community involvement in such work; and
- the rural population needs to be involved in the design and follow-up of plans and projects, not simply their implementation.

A good example for community outreach is the “Tanzania Community Conservation Project” (see Box 31; cf. also Box 32).

3.4.8 Co-operation design

Co-operation involves efforts on the part of the PA’s management to create a network of strategic partners. In the regions, partnerships can be established between a large number of parties, comprising individuals, stakeholders, NGOs, experts, various sectors and other responsible authorities. Co-operation with other PAs is mostly organised within the framework of partnership agreements, umbrella organisations or transborder co-operation.

Basics of co-operation

“Co-operation is the process of working or acting together, which can be accomplished by both intentional and non-intentional agents. In its simplest form it involves things working in harmony, side by side, while in its more complicated forms, it can involve something as complex as the inner workings of a human being or even the social patterns of a nation. It is the alternative to working separately in competition” (www.wikipedia.org).

Co-operation means joint operation for a common benefit. In terms of protected areas, co-operation can be manifold on a variety of dimensions – the local, regional, national, transboundary and international ones.

There are several types of co-operation:

- horizontal (i.e. between PA and PA);
- vertical (i.e. between different levels of authorities in charge of nature/biodiversity conservation such as national, regional or local authorities); and
- cross-sectoral (i.e. between PA and individuals/organisations from outside the protected areas and nature conservation authorities/institutions sphere: partner programmes with related sectors like tourism, natural resource use like forestry, agriculture; cooperation with interested individuals and companies like in the form of Friends of the park or volunteer programmes; NGOs).

The management task of designing co-operation structures comes at a rather late stage in the lifecycle of a protected area, namely the implementation phase. Every type of co-operation has its particular (legal) foundation, institutional setting, personalities, duration, scope, intensity, reason and set of rules.

Horizontal co-operation

There is a variety of ways an *individual* protected area manager can co-operate with other protected area managers or individual experts. Some of these opportunities are informal, like friendship and sharing of experience with other managers. Others are more formal and involve membership in more structured networks (like IUCN World Commission on Protected Areas or PALNet; see Box 33).

Box 33: Horizontal co-operation among PA experts

PALNet or Protected Areas Learning Network is a knowledge sharing web-based platform for people working in protected areas. It is backed by “IUCN and WCPA scientists and practitioners, and partner individuals and organizations, which aims to help protected area managers to access and generate new knowledge and raise their professional capacity by sharing and exchanging field based experience and rapidly developing science.” (www.parksnet.org)

Triglav National Park in Slovenia has a diverse network of co-operations. It has an institutionalised co-operation with Hohe Tauern National Park in Austria. This cooperation was formally set up by a partnership agreement signed in 1996 for the exchange of experience, best practice and staff. In addition, common projects to solve common problems were implemented (e.g. on marketing, on monitoring).

Triglav National Park has also a co-operation with almost adjoining Prealpi Giulie Regional Nature Park in the west of the park territory. It is backed by several bi- and multilateral co-operation agreements on regional and local levels. The two parks expressed their will to be certified as transboundary parks by EUROPARC. Co-operation is targeted at sustainable development, education, nature-friendly tourism and more recently nature conservation (Lange, 2009).

Another level of horizontal co-operation relates to co-operation between individual protected areas. Collaboration can be limited to specific topics (for example, solving a similar problem, investigating in same species / habitats), co-funded one-time projects, longer-term programmes (for example, a staff exchange programme) or formal partnerships with (explicit) partnership agreements.

One specific form of co-operation among protected areas as just highlighted in the case of Triglav National Park and Prealpi Giulie Nature Park is a transboundary park – a topic that has received much attention in politics, science and administration over the last two decades. Fig. 46 highlights different forms of co-operation intensity for this type of protected area collaboration but it can also serve as an indication of co-operation levels for other protected area “peer to peer” situations.

Table 7: Six levels of co-operation between internationally adjoining protected areas

<i>Levels of cooperation</i>	<i>Characteristics</i>
<i>Level 0: No cooperation</i>	<ul style="list-style-type: none"> - Staff from adjoining protected areas never communicate or meet. - No information is shared, no cooperation occurs on any issue.
<i>Level 1: Communication</i>	<ul style="list-style-type: none"> - There is some two-way communication between the PAs. - Meetings or communication take place at least once a year. - Information is sometimes shared. - Notification of actions which may affect the other PA will sometimes take place.
<i>Level 2: Consultation</i>	<ul style="list-style-type: none"> - Communication is more frequent (at least three times a year). - Cooperation occurs on at least two different activities. - The two sides usually share information. - Notification of actions affecting the adjoining PA usually occurs.
<i>Level 3: Collaboration</i>	<ul style="list-style-type: none"> - Communication is frequent (at least every two months). - Meetings occur at least three times a year. - The two PAs actively co-operate on at least four activities, sometimes coordinating their planning and consulting with the other PA before taking action.
<i>Level 4: Coordination of planning</i>	<ul style="list-style-type: none"> - The two PAs communicate often and coordinate actions in some areas, especially in planning. - The two PAs work together on at least five activities, holding regular meetings and notifying each other in cases of emergency. - PAs usually co-ordinate their planning, often treating the whole area as a single ecological unit.
<i>Level 5: Full cooperation</i>	<ul style="list-style-type: none"> - Planning for the two PAs is fully integrated, and, if appropriate, ecosystem-based, with implied joint decision-making and common goals. - Joint planning occurs, and, if the two share an ecosystem, this planning usually treats the two PAs as a whole. - Joint management sometimes occurs, with cooperation on at least six activities. - A joint committee exists for advising on transboundary cooperation.

Source: Sandwith et al. (2001), adapted from the classification system of Zbicz (1999).

Another form of horizontal co-operation between protected areas is the one in an umbrella organisation / network and its resulting activities. Membership can be automatic or voluntary and application-driven as highlighted in the following example.

Box 34: Umbrella organisations of protected areas

The Hohe Tauern National Park is part of the Austrian national protected area system, and especially its umbrella brand “Nationalparks Austria”. The national park stretches over 3 federal States in Austria, each of them having their own management. Very close co-operation between these units is institutionalised and well accepted.

Due to the fact that Austria is a party to the Alpine Convention, Hohe Tauern National Park is also part of ALPARC. ALPARC (www.alparc.org) is the umbrella organisation for protected areas in the Alps fostering cross-border co-operation among more than 800 large scale (> 100 hectares) protected areas with a total staff of more than 3,000. ALPARC was established in 1995 and has four thematic fields of activity: habitats and species, tourism and culture, agriculture and forestry, communication and education. It organises meetings and workshops, produces information material and cooperation tools and is supportive in international projects of its members.

National Park Hohe Tauern is also a voluntary member of EUROPARC Federation - a European umbrella organisation connecting 441 members (including protected areas, governmental departments, NGOs and businesses) in 36 countries. EUROPARC's mission is “to be the leading European organisation for protected areas bringing together dedicated professionals, government agencies, decision makers and supporters to increase effectiveness in conserving and enhancing natural and cultural heritage on land and sea for the well-being and benefit of current and future generations” (www.europarc.org).

There is also the opportunity to co-operate with protected areas of the same “category” (which in this context includes also predicates like UNESCO Biosphere Reserve, UNESCO World Heritage Site, Ramsar wetland of international importance, PAN Park etc.).

For instance, 262 biosphere reserves are currently united by UNESCO’s Man and Biosphere (MAB) Reserves’ regional co-operation under the EuroMAB network covering 33 countries in Europe, US and Canada. The network was founded in 1987 and is the largest and oldest of the MAB networks with a vast diversity of socio-economic and ecological conditions, cultural backgrounds and languages. Due to its size and diversity, EuroMAB functions through groups of countries and biosphere reserves which have a common interest in a given theme, for which a site or a country takes the lead. There is a EuroMAB web platform and network meeting to facilitate co-operation for network members⁹.

⁹ EuroMAB Web-Platform at www.unesco.org.

Cross-sectoral co-operation

This form of co-operation takes place between protected areas and individuals or organisations from outside the protected areas and nature conservation authorities' sphere. Whereas one of the main reasons for horizontal co-operation (especially on the PA systems level) are the increase in resource use efficiency and know-how (of management, staff, stakeholder groups), most of the cross-sectoral networks are dedicated to support acceptance and regional ownership of the protected area concept, to enable stronger participation, to promote appropriate economic development in the wider PA region or to serve as co-funding tools. They can range from partner programmes with related sectors (like tourism, natural resource uses like forestry and agriculture) to cooperation with interested individuals and companies like in the form of Friends of the Park or volunteer programmes. Box 35 shows the potentials for cross-sectoral cooperation (cf. Getzner et al., 2009).

Box 35: Cross-sectoral cooperation of Hohe Tauern National Park (Austria)

National Park (Carinthian part) and tourism: Since 2006 the separate tourism department of the Hohe Tauern National Park is in charge of developing appropriate product (travel) packages by coordinating offers from the national park as well as local service providers and marketing them. The park has established a close cooperation with about 30 tourism service providers which adhere to common quality criteria. First results of the efforts show a substantial increase in visitor requests and an extension in the length of stay of tourists (www.hohetauern.at).

Association of Friends of the Hohe Tauern National Park: The association is a sponsorship vehicle registered as an association in 1992. It is managed by the (Carinthian) park director and supported by a president from the private sector. The association aims at supporting projects which promote the development of the national park. Projects are selected by an expert committee. Within protected areas in the Alpine region it is one of the best practice examples in attracting and managing sponsorships. The involvement in and cooperation with the business sector has substantially increased the park's public awareness range. It enabled the park to gain access to and support from a new group of opinion leaders and improved its knowledge and experience on marketing and fundraising (www.tauernfreund.at).

3.4.9 Information, interpretation and education

With few exceptions protected areas have the task of educating and raising public awareness regarding nature, ecology, sustainability and related issues. Information, interpretation and education activities make the park's values and outstanding features available to the general public on a broad scale.

Whereas 'information' means solely the provision of facts (e.g. fees, facilities offered, times of operation or park location), the aim of interpretation is to facilitate an understanding and appreciation of the protected area's assets. It occurs in informal settings such as visitor centres or guided and self guided walks. Education, however, provides structured information in formal settings (e.g. through academies, seminars or schools) and aims at people whose primary objective is to learn about their natural and cultural heritage (Figure 43).



Interpretation happens in informal settings (visitor centres, excursions); people are motivated by internal rewards (interest, passing time)



Education occurs in formal settings (class rooms, courses); people are additionally motivated by external rewards (certifications, diplomas)

Figure 43: Interpretation and education

From environmental education towards education for sustainable development

As a rule protected areas tend to focus mostly on environmental education. Visitor centres and brochures provide information and knowledge on plants, animals, landscapes and traditional land use within the PA's boundaries. However, the more people around the world recognise that the current development trends are not sustainable the more education becomes an essential tool not only to inform people on nature and biodiversity but to bring about a change in values, attitudes and lifestyles.

In general, the level of education is directly or indirectly linked to resource use and biodiversity conservation. In a society, people with a higher education level

are usually more concerned with environmental conservation. However, higher education also leads to increased economic productivity and, thus, higher income (GDP). Higher income (production, consumption) is closely linked to resource use. On the other hand, poverty and poor education might also be major driving forces of resource use and overexploitation. The most educated nations leave the deepest ecological footprints. In this case, more education even increases the threat to biodiversity (McKeown, 2002). Clearly, educating citizens so far was not sufficient for creating sustainable societies. The current efforts have to be further developed in order to facilitate people to cope with and find solutions to problems that threaten the sustainability of the planet (UNESCO, 2007). Education is certainly a key to sustainable development in developing countries as well as sustainable lifestyles in industrialised countries. With respect to biodiversity and ecosystems, protected areas can play a crucial role in educating the general public about threats to the ecological integrity as well as sustainability.

In 2005, UNESCO launched the United Nations “Decade of Education for Sustainable Development (DESD)”. Within this decade it is envisaged that special efforts should be made to promote the vision of a more sustainable and just global community through different forms of education, public awareness and training activities (UNESCO, 2007).

On the issue of education for sustainable development, three core fields of competence should be conveyed (BMZ, 2007):

- From *recognition* (understanding of global processes and complex interrelations),
- to *evaluation* (realisation of own and foreign values, critical reflection and evaluation of effectiveness of different measures),
- which finally should result in *action* (realisation of personal responsibilities, ability to solve conflicts and actively participate in development processes).

The role of protected areas in education for sustainability

Protected areas can significantly contribute to education for sustainable development. Experiencing nature and understanding the interdependence between humans and nature are powerful tools in changing values and behaviour¹⁰. Because “real change is not generated by knowledge, not even by absolutely certain knowledge about the state of things, it follows emotional needs, commitment and love” (Kyöstilä et al., 2001).

¹⁰ Asked about the reasons for being committed to nature conservation, the majority of the students of the master studies “Management of Protected Areas” answered that early childhood contacts with the natural environment raised their interest in the topic (cf. Getzner and Geroldinger, 2009).

Moreover, protected areas can demonstrate environmentally friendly solutions, such as attractive public transport systems (e.g. “Alm-Erlebnis-Bus”, a trans-boundary bus connection between Berchtesgaden National Park (Germany) and Weissbach Nature Park (Austria) (www.almerlebnisbus.com)), energy efficient buildings (e.g. low-energy design of the visitor centre of the Zion National Park, USA) or organic food offers (e.g. restaurant in the “house of wilderness” in the Bavarian Forest National Park (Germany) with certified organic food from the region; see www.gastronomie-hauszurwildnis.de). In the Entlebuch Biosphere Reserve (Switzerland), for example, students are invited to learn about forests, timber production, processing and finally recycling processes (www.biosphaere.ch).

Information, interpretation and education tools

There is a great variety of different information, interpretation and education measures to communicate the PA’s core message to the target groups. For each target group, different tools might be developed and applied (see Figure 47, and chapter 3.4.10), such as

- websites, folders and brochures,
- information panels and exhibitions,
- information centres,
- hiking or interpretation trails (in some cases equipped with portable navigation tools),
- guided tours, excursions and events,
- observation platforms or tree top trails,
- programmes for volunteers, junior rangers, and students,
- scientific symposia, seminars or training centres,
- or specific accommodation offered in the park.

It is important to keep in mind that voluntary audiences will focus their attention only on something they find enjoyable, relevant and rewarding. They will ignore any information that seems unimportant to them even if they understood it perfectly well. Much more attention is usually paid to information that is connected to our own experiences and daily lives (Lang and Pauli, 2009).

Involvement of stakeholder groups

Interpretation and educational offers are often developed by trained communication experts. However for successfully targeting specific customer groups it is helpful to involve representatives of the respective groups in the design or imple-

mentation of the offers. The participants of the World Conference on Education for Sustainable Development in their “Bonn Declaration”, for example, call for an involvement of “youth in the design and implementation of education for sustainable development” in order to “foster young people’s ownership” for future oriented development questions (UNESCO, 2009; see Box 36). In some cases, this advice has already been heeded.

Box 36: Involving the youth in PA activities

The *Bavarian Forest National Park* (Germany) cooperates with protected areas around the world where teenagers from related parks in Brazil, Chile, Mongolia or Vietnam (amongst others) were invited to design accommodation representing the traditional life-styles in their homelands (cp. Fig. 53). The traditional huts were jointly constructed at the “international wilderness camp” of the National Park, and now serves as accommodation for groups who don’t mind basic comfort (no electricity, no running water) but want to learn about foreign cultures and discuss global interrelations with respect to biodiversity conservation.



Construction of the yurt (left) in the international wilderness camp in National Park Bavarian Forest



Celebration with Mongolian musicians

At the *Gauja National Park* (Latvia) Junior Rangers have been encouraged to discover nature at night. After being taught for four nights, the Junior Rangers themselves started to guide local youth groups out in nature during the night-time. Afterwards they designed an exhibition showing their experiences with their own photographs (Langenfelde, 2008).

Regional development

Well promoted, spectacular educational offers or visitor infrastructure in protected areas attract additional visitors who might not be interested in visiting the

park just because of its beautiful landscape or its large numbers of species. This has been recognised, for instance, by the Hallstatt-Dachstein region. Since the opening of the observation platform “5 fingers” (see Figure 47) the frequency of the cable car carrying passengers to the top (in walking distance to the platform) has increased by 25 to 30 per cent. In 2008, about 60,000 visitors enjoyed the view from this observation point. However, these numbers indicate that such infrastructures might also be a threat to sensitive ecosystems. Visitor management (see chapter 3.4.10) is therefore a crucial element in any infrastructure policy.

Besides, creative indoor exhibitions make a visit to a park worthwhile, even in bad weather conditions, especially for families with children who seem to be attracted by interactive offers.

3.4.10 Visitor management, services and infrastructures

As the growth in global tourism continues to climb and is forecast by the World Travel and Tourist Council (Lockwood et al., 2006) to keep growing, travelling to protected areas (PA) is also significantly increasing worldwide. Visitor management of PAs is thus a key issue of the tasks of PA managers. Benefits of managing PA visitors in an effective manner can

- contribute to the visitor’s understanding and appreciation of a PA;
- reduce damage to sensitive sites and localities;
- tackle issues that may be affecting the quality of the visitor’s personal experience and the quality of life for local people;
- attract and disperse visitors within the PA or network of PAs so as to spread the economic benefits more widely (bump-off economic effects for local communities and regional development);
- encourage more visitors to come at times when there is plenty of spare capacity; and
- encourage visitors to visit those parts of the PA that are best able to handle them.

Visitor management, and building up services and infrastructures are the systematic identification, analysis and control of the broad range of issues relating to visitors. Access regulations, available services and transport facilities, signposting, information relating to visitor behaviour, risks and potential dangers are some of the key issues which the PA’s management has to address. Due to the different categories of PAs and specific local conditions, visitor management requires a sophisticated and site-based approach to meet the needs of visitors and operators as well as local tenants and residents. Visitor regulations must be drawn up within the context of adjoining infrastructures, tourist requirements and legal policies.

Lockwood et al. (2006) stated eight management principles for visitor management in PAs:

- (1) It is important that management of visitors is carried out in a sustainable way and is part of the overall PA management framework.
- (2) The sustainable management of tourism requires the development of partnerships between PA managers, the tourism industry and the local community.
- (3) Effective management requires the evaluation of visitor impact. High quality environmental and cultural conditions need to be maintained to realise the economic benefits brought by tourism.
- (4) Management should facilitate rewarding, safe and enjoyable experiences for visitors, without compromising conservation objectives.
- (5) Planning tools are essential to manage visitor opportunities effectively. PA managers should facilitate at a regional scale the provision of an appropriate range of recreational opportunities.
- (6) Regular communication of current and quality information should be provided to the public. Visitors are more likely to support PA management if they are aware of the real cost of maintaining visitor sites and if revenue from tourism is reinvested in providing these services.
- (7) Visitor interpretation has a number of principles for interpreting PA values [...].
- (8) Well-managed tourism in PAs offers opportunities for poverty alleviation and consequent community support for conservation.

Visitor management in PAs is always in conflict between providing a high recreation quality for visitors on one hand, but on the other hand concentrating visitors in certain areas to avoid spatial expansion of leisure time activities in order to reduce disturbance in most parts of the PA. The goal is to achieve a balance between nature conservation targets and education and recreation possibilities. To realize that, a very thorough and detailed data basis is needed to identify ecologically sensitive areas. Excursions and other activities within the PA's visitor programme should avoid these areas and take place in the buffer zone of a PA. Box 37 highlights the framework of PA tourism with respect to the recommendations of IUCN.

Box 37: Recommendations for sustainable tourism in protected areas by the 5th IUCN World Parks Congress

At the 5th IUCN World Parks Congress in 2003 (Durban, South Africa), recommendation V.12.1 states that the tourism sector, including appropriate institutions, associations, and operators, work together with protected area managers and communities to ensure that tourism initiatives associated with PAs, in both developed and developing countries, and should

- respect the primacy of the role of conservation for PAs;
- make tangible and equitable financial contributions to conservation and to PA management;
- ensure tourism contributes to local economic development and poverty reduction through:
 - support to local small and medium sized enterprises;
 - employment of local people;
 - purchasing of local goods and services; and
 - fair and equitable partnerships with local communities; and
- use relevant approaches that encourage appropriate behaviour by visitors (e.g. environmental education, interpretation, and marketing).
- use ecologically and culturally appropriate technologies, infrastructure, facilities and materials in and/or near PAs;
- monitor, report and mitigate negative impacts and enhance the positive effects of tourism;
- communicate the benefits of PAs and the imperative for conservation; and
- promote the use of guidelines, codes of practice and certification programmes.

The visitor guidance system itself should be based on information and creation of awareness rather than prohibition and fines. One way to change the behaviour of visitors unconsciously and without coercion is de-marketing. De-marketing means that visitors are strongly attracted to certain areas, while sensitive areas are concealed by not mentioning them on any sign. For instance, in UK, the county of Somerset cut all public sector marketing mention of a fragile range of beautiful hills, the Quantocks, and removed signage to the hills and through signing of villages on either side of the hills. In general, de-marketing can be useful at local and sub-regional level. It is a technique that requires consensus amongst stakeholders and thus, it is highly recommendable to finalise the draft of the visitor concept by means of participation that involves regional politicians, stakeholders and opinion leaders (Lane, 2008).

Services and infrastructures

Concerning services and infrastructures, it is important to keep in mind that the installation of exhibitions and other infrastructures inside the PA alone is not enough. A closed service chain should offer everything for basic needs from that moment on visitors arrive at the PA. Service chains consider the full life-cycle of service demand from early stages of forecasting, through planning, scheduling, dispatch, execution and post-analysis. For example, a great interpretation trail for handicapped visitors will only work if there is also barrier-free infrastructure at the access area and parking site (Lang and Pauli, 2008). In most cases, the thirst for knowledge and willingness to learn of PA visitors are highly overestimated, while basic needs, such as entertainment and catering, are neglected. In general, the PA infrastructure should be adapted to the requirements of the visitors. Figure 44, Box 38, Box 39, and Box 40 highlight prominent approaches to visitor management and infrastructure development.

Besides the implementation of visitor facilities, monitoring and checking of quality standards is necessary. For example, in the Austrian province Carinthia, a standardised certification system for all offered interpretation trails was developed (Jungmeier and Zollner, 2002). The trails are assessed at their contribution to a sustainable increase of regional added value along the following criteria:

- direct revenues (e.g. admission fees, sale);
- indirect revenues (e.g. regional services, products and cooperation); and
- indirect profitability (regional marketing and offers, guest retention).

The criteria for evaluating education and experience value are

- quality of contents (e.g. innovativeness, information content, exceptional highlights);
- quality of design (e.g. user-friendliness, reference to region and surrounding landscape, pedagogical and technical preparation); and
- quality of support (maintenance, personal support, further development).



Entrance gate to Giant's Castle in the uKhahlamba Drakensberg Park (South Africa)



Entrance point to Jostedalsgreen National Park (Norway)



Visitor centre at Jostedalsgreen National Park (Norway)



Accessible trails for visitors



Sounds in the "Klang Schlucht" at Millstatt (Austria)



Figure 44: Examples of prominent visitor infrastructure

Box 38: Visitor monitoring at Müritz National Park (Germany)

The Müritz National Park is located in the north-eastern part of Germany where visitors can access the national park from many sites. A visitor monitoring scheme was established in 1999 to identify the magnitude of visitation per day and over the season, indicating where visitors go and what they do (i.e. how they move around the park: walking, biking, canoeing, horse-back riding). Besides calculating the approximate total number of visitors per year, the results have indicated the spatial distribution of tourists and their main activities. This visitor monitoring is repeated every three years with sample checks being made annually. Special monitoring of biodiversity indicators (species and habitats) are being carried out on sites identified critical to visitor impact, for example around the crane resting areas and the habitats along the waterways for canoeing. Following the monitoring results, visitation to the crane resting areas has been adapted and the crane monitoring now reflects the effectiveness of these management measures. Similar adaptive changes are currently being discussed in a multi-stakeholder forum concerning canoeing (CBD, 2010).

Box 39: Local visitor management at Logarska Dolina Landscape Park (Slovenia)

In 1987, the Logarska Dolina Landscape Park (Slovenia) was officially established; however, the new park did not provide solutions to the unresolved local tourism-related problems as no financing of the park's operation was provided. Therefore local stakeholders took the initiative and set development goals, founded a company and acquired the concession to manage the park. Various business partners, land owners, local community members, and visitors to the area were involved in the management process of the park.

The first activities focused on the ecological restoration and on the provision of basic infrastructure for park development. Further actions were taken on visitor management, education, and coordination with the private business sector. Nowadays, the park's focus is on ecotourism and use of renewable energies. The responsible park's management company closely cooperates with a number of organisations and individuals involved in sustainable development of comparable areas. Due to its successful management, the park has won a number of awards and certificates in the field of sustainable development and visitor management such as the Future in the Alps competition and the EDEN award (for further information, see www.logarska-dolina.si).

Box 40: Visitor management and resource protection at Gesäuse National Park (Austria)

The Gesäuse National Park was founded in 2003 and is a Natura 2000 site as well. The national park's visitor management concept aims to balance the aims of nature protection with that of high quality nature experience and recreation. In 2007, a new visitor management concept was developed according to the VERP - Visitor Experience and Resource Protection Framework – the principles of which are currently being used in many US national parks.

Therefore, all available information on different activities in the National Park was collected and summarized. Main activities include hiking, climbing, mountainbiking, rafting, canyoning and recreation at the river in the summer. During wintertime ski mountaineering is the main action. The risk analysis showed high risk of spoiling for river habitats and species due to rafting, mainly. In addition, hiking and ski mountaineering affects grouse species negatively. Depending on the visitor activities and management requirements seven management zones were designated: (1) river zone, (2) nature trail zone, (3) hiking zone, (4) climbing zone, (5) ski mountaineering zone, (6) resource protection zone and (7) developed zone. For each zone the type of area, natural resources within sensitive habitats and species, accessibility and potential activities, visitors' experience, intensity of use, infrastructure and management, as well as development and future conditions are described (see also Figure 45).

According to the precautionary principle, management actions can already be taken, once any sign of negative impact on species or habitats is given. Existing planned management actions are listed for each management zone, e.g. the amendment of the Navigation Regulation, temporal limitations of rafting and canyoning, the order to walk dogs on leash only, the improvement of markings, information panels and enhanced ranger controls in sensitive habitats, as well as management actions for sensitive species. In addition, management actions are defined concerning excursions within the National Park programmes (use of vehicles), visitor facilities (night time illumination, etc.), events, commercial tour operators, training of National Park employees and rangers, public relations and communication. Within this concept a first definition of indicators and possible standards as well as a draft of a monitoring plan and a checklist is included (Zechner, 2007).

	Conservation status	Hiking	Climbing	Rafting, kayaking, etc.	Canyoning	Recreation at the river	Angling	Mushrooming	Aviation	Ski mountaineering	Snowshoeing
Natura 2000 habitats and species											
3220 Alpine rivers and the herbaceous vegetation along their banks	B	1		3	1	3	2				
1098 Ukrainian brook lamprey <i>Eudontomyzon mariae</i>	B			3	1	1	1				
1131 Varione <i>Leuciscus souffia</i>	C			3	2	2	2				
1163 European Bullhead <i>Cottus gobio</i>	B			3	1	1	1				
1355 Otter <i>Lutra lutra</i>	C			3	2	3	3				
1902 Lady's slipper <i>Cypripedium calceolus</i>	B	2									
A091 Golden eagle <i>Aquila chrysaetos</i>	B	2	1						3	2	
A103 Peregrine Falcon <i>Falco peregrinus</i>	B								2		
A104 Hazel grouse <i>Bonasa bonasia</i>	B	2						1		3/1	2
A108 Capercaillie <i>Tetrao urogallus</i>	B	3						1		3/2	3
A215 Eagle owl <i>Bubo bubo</i>	B								2		

Figure 45: Summary of risk analysis of leisure activities in the PA.

1 = low risk of spoiling, 2 = moderate, 3 = high. Conservation status A = excellent, B = good and C = average

Source: Gesäuse national park (www.nationalpark.co.at).

Stakeholders and visitor management

Stakeholder involvement is crucial for a successful PA visitor management concept. After embedding visitors activities into the legal, infrastructure and natural conditions prevailing within the PA, managers should pose the questions of what should be accessible, whom to attract, and what to avoid as part of a participative process with landowners. But also other stakeholders should be integrated: tourism associations and agencies, tour operators and public transport operators. Even stakeholders critical to the protected area, such as hunters or fishers, can support the management of visitors.

In a next step, a visitor guidance system needs to be developed. Therefore, a set of materials to guide visitors through the areas, to viewpoints and through the routes intended to attract/educate/delight the visitor (“hot-spots”) should be prepared, thereby taking into account the question of target groups. If interpretation trails, exhibitions and facilities for particular target groups, such as handicapped people, are planned, it is highly recommendable to actively involve them in the planning and implementation to get their early feedback. In general, it is important

to provide a well-balanced network of infrastructures, (interpretive trails, info points, visitor centres, etc.) and also risk implementing new technologies.

Making management decisions in protected areas is not an easy task. Especially for access planning and visitor management, park managers have to involve affected citizens, including the local public, visitors, private tour operators and scientists as each of them perceive tourism from its own unique perspective. Round tables should be organised so that each party can contribute constructively to the various components of the process, and thus feel “ownership” of the plan. Consensus-building results in acceptance, so that public resources can be allocated to implement the plan and potential restrictions for public use of the protected area are respected (Eagles et al., 2002). Regarding plans for improving access of impaired visitors, it is strongly advised that specific excursions are organised, and that the PA planners and managers learn about the specific needs of these important groups of visitors.

Eagles et al. (2002) stress that the entire decision-making process must be designed for stakeholder involvement throughout, not just added on to the process, after the fact. Each participation programme should be designed to meet the specific needs of the situation, rather than imposing a pre-determined methodology that may have worked well in other circumstances. Stakeholders are discouraged and may consider the whole process as incredible if they are told that their involvement is important, while on the other hand, only very limited resources in terms of time and money are allocated to participation processes and potential projects that results from these.

Regional development

Offering tourism activities in a PA are often a management goal and can provide an opportunity for local communities and the region as a whole. PAs are often located in regions where employment opportunities are limited. Therefore, they may contribute to regional development by attracting and guiding tourists. Therefore, wherever possible, local products and staff should be used and promoted from the region. It is essential to have a good cooperation with regional partners and commercial operators, as most PAs do not offer touristic infrastructure such as hotels or restaurants.

Major investments, such as visitor centres, have to be planned carefully regarding their location in popular and well-frequented areas. Visitor centres are not only magnets for visitors; they are also representing the PA in the region and can be used as meeting place for local associations and events. Anyway, exorbitant and overpriced infrastructure in the visitor centre can create enormous follow-up costs that become a millstone around a PA’s neck, as it is an unprofitable investment.

Thus, it is important to calculate realistically to cover all running costs. An attractive visitor centre does not have to be expensive and imposing, since creativity and innovation are more crucial (Jungmeier, 2006; see Figure 46).

Protected areas can also determine specific target groups of tourists and attract visitors with special needs (see Box 41) in order to design specific offers.



Figure 46: Visitor centre in the “Willow Dome” at Gesäuse National Park (Austria)

In general it is better to focus on some exceptional offers (e.g. a breath-taking tree-top-trail, an ambitious program for school children or an innovative portable information system for hikers and visitors) instead of providing a wide range of ordinary measures. Some spectacular and innovative examples for visitor infrastructure are demonstrated in Figure 47. As can be seen from these pictures, some of these infrastructures for visitors may also be criticised as a major intervention into nature (even if other “infrastructures” may not be allowed in the protected area), and may be subject to a separate impact assessment.



Observation platform “5 fingers” in the Hallstatt-Dachstein World Heritage Site (Austria)



Inauguration of a tree-top-trail in Bavarian Forest National Park (Germany)



Information panel, showing the habitats of insects in Gesäuse National Park, Austria



Spectacular information centre in the Karwendel mountain range, Germany



BLIS AlpenRanger, a portable information system with satellite navigation for hikers in National Park Berchtesgaden

Figure 47: Practical approaches to information, education and interpretation in European protected areas

Box 41: Planning access for user groups with special needs

Naturally, protected areas should be accessible by everybody. However, so far the needs of handicapped people were neglected in many parks. In 2005, the management team of *Berchtesgaden National Park* (Germany) decided that this has to change for the better. In the current management plan of the park, adopted in 2001 and valid until 2011, the requirements of handicapped visitors were not addressed in particular. Consequently, a subsidiary plan dedicated to barrier-free infrastructure and services was drafted. It shall be incorporated into the regular management plan as cross-cutting task and serve as a model for barrier-free access in German protected areas (see Figure 48). As a first step of the project, the technical and legal basis was elaborated to show that nature conservation and barrier-free access are no contradiction. Secondly, the existing park services were surveyed with respect to their suitability for different types of handicapped people (e.g. people with walking disability, visual, hearing or learning impairment). Finally, 67 measures (including cost estimates) were proposed which shall be implemented within the next ten years in order to allow for a full access to the national park for all kind of visitors (more information can be found at www.barrierefreiplan-natur.de).



Figure 48: Excursion of handicapped people in the Klausbachtal at Berchtesgaden National Park (Germany)

3.4.11 Marketing and public relations

Marketing is the practice of connecting demand with a supply of goods and services. In the context of a protected area, marketing should ideally include “selling” assets (such as brand and image) as well as physical goods (e.g. handicrafts) by various methods (e.g. exclusive information provision via a homepage, or by providing stalls etc.). The degree of marketing depends largely upon the PA’s category and size and can range from intensive marketing to de-marketing (see chapter 3.4.10). Typically, a professional approach comprises several key elements: client analysis, product definition, development and contribution, competition evaluation, strategic partnerships and synergies, campaigns and advertisements.

Decisions on marketing generally fall into four controllable categories known in the business world as the ‘Four Ps’: (1) Product, (2) Price, (3) Place and (4) Promotion. All these elements together are referred to as the marketing mix that lists a number of company performance actions that influence the consumer decision to purchase goods or services (cf. Boden, 1964).

- (1) *Product decisions*, refer to tangible physical products (e.g. artwork, accommodation in wilderness areas, hiking trails, guided tours, game drives, adventure tourism), as well as intangible services provided by the PA (e.g. good quality water, protection of nature and cultural heritage). It is important to consider how these products relate to the end user (visitors, general public benefiting from ecosystem services) and how broad and specialized the range of offers should be.
- (2) *Pricing decisions* will include the setting of prices for the products offered by the PA, such as entrance fees, overnight accommodation, guided tours, or gifts. The pricing strategy should include issues such as volume discounts, cash and early payment discounts, seasonal pricing, bundling (e.g. a better price for a bundle of more than one product), price flexibility, and price discrimination (e.g. children rates, group fees).
- (3) *Place decisions* or distribution channels define how the product or services actually get to the customer. One needs to consider the point of sale (e.g. park shop, visitor centre) and how the product is sold, for instance, online, by telephone (in the case of bookings for accommodation) or through retail outlets (e.g. shops or at tourists facilities that border the PA). Place also applies to the geographic region and the market segment (young adults, families, business people) in which the products and services of the PA are or may be in demand.
- (4) *Promotion decisions* represent the various aspects of marketing communication, meaning communication of information about the products and ser-

vices of a PA with the goal of generating a positive customer response. These include: promotion strategy, advertising, personal selling, sales promotions, public relations, publicity and branding.

Of course, a PA mainly is an institution close to government agencies, and, unlike a business company, is not always free to choose and develop its marketing strategy on its own because certain framework conditions are given (location, price level). Therefore, it is necessary to view a PA as a “package” including the region, and not to focus on sales-oriented marketing measures.

Adopting a strategic approach to tourism must be included in the marketing plan which also means getting actively involved and having a say in the development of the PA’s region by having a clear vision on what products and services can and cannot be offered to visitors. One of the elements of the marketing strategy should be to carry out a detailed inventory, visitor survey and an analysis of the region in which the PA is situated (Kreisel, 2002).

Branding

A brand is not a logo, a product or a company. A brand is a person’s gut feeling about a product, a company, a service, or a hotel. It is a gut feeling because everybody is emotional, intuitive, despite best efforts to be rational. While marketing is only a one-way communication, branding is in a dialog with customers. The aim of branding is that the customer thinks that there is no substitute for a specific brand, a monopoly position in the psyche of the customer. Brands offer customers orientation in a complex world full of products and advertisement, identification with its personality and satisfy the human need for safety and security (to know what to receive from a brand product; Unterköfler, 2009).

There are pillars that build up a brand (see also Figure 49):

(1) *Image*: having a relevant promise (e.g. time for nature), communicating over a variety of media (storytelling), offering possibilities to participate (e.g. volunteers, children programmes, sponsorships, virtual social media partnerships), and defining a PA’s individual values and three core messages.

(2) *Trust*: not to forget its history (brand inheritance), implementing innovations, being authentic by transparent actions and implementing what is promised and maintain a common design and appearance.

(3) *Performance*: communicating contents in an easy understandable way and offering a good visitor service.

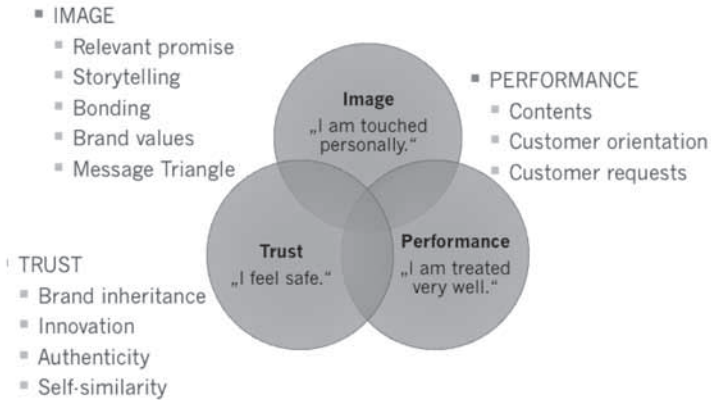


Figure 49: Three pillars of building up a brand

Source: Unterköfler, 2009.

PA managers should understand, develop and promote a PA’s name as brand and identify a PA’s cooperative message or promise. It is important not to forget that PA staff (professionals as well as volunteers) should be involved and may be enthusiastic, competent and genuine promoters of the PA’s brand.

The basis for developing a brand is a clear vision and company profile, called Corporate Identity (CI). The corporate identity defines the values and goals of an organization. It is divided into corporate behaviour, corporate communications and corporate design.

Public relations

Generally, public relations is defined as practice of managing communication between an organization and its publics. In contrast to advertisement, that tries to motivate target groups to buy a product, public relations or publicity wants to influence people’s attitude towards an organisation. Public relations does not try to sell something directly, but it contributes to increase profit. The three main targets of public relations are (1) attracting attention, (2) building trust in the credibility of an organisation and (3) obtaining approval and support for an organisation’s actions and goals.

Public relations tools are numerous and constantly increasing through new media, but the most important tools are

- face-to-face communication (e.g. speaking at conferences, seminars, networking);
- media relations, such as
 - direct (e.g. interviews, press conferences, press trips), and
 - released (e.g. news releases, professional articles, comments, advertisements);
- print papers (e.g. magazines, brochures, annual reports, posters, books, post cards);
- events (e.g. exhibitions, congresses, open house, panel discussions, trade fairs);
- electronic media (e.g. homepage, newsletter, mailing list, social media engagements);
- political public relations (lobbying); and
- sponsoring.

Public relations is not only external, it is also important to inform the employees

- directly (e.g. personal talks, black board, consultation hour, competitions and awards, information events);
- in printed form (e.g. vision, company magazine, employees meeting, notices, circular letter, offered brochures of organization); or
- via electronic media (e.g. memos, newsletters, intranet, information database, online press review).

For PAs it is very useful to establish long-term public relations partnerships with media, agencies and local and regional communicators. At first prepare the ways of communicating a PA, and then identify the recipients of the messages and the best ways of communication (newsletters, events, commercials, etc.). In general, it is more effective to communicate rather image than information (Kobinza, 2007). Box 42 highlights the experience with public relations from the viewpoint of Austria's largest national park (Hohe Tauern).

Box 42: Public relations in the Hohe Tauern National Park (Austria)

The Hohe Tauern National Park is very active and successful in communications. For instance, it promises “Experiencing nature” and slogan is present in all visitor information folders as headline on the cover. The experience factor itself is definitely given a special emphasis in visitor offers. Also, the National Park communicates via a variety of media: information leaflets, a quarterly published magazine, lots of different books (hiking guides, illustrated books, scientific series) and a special products for children. There is also a wide range of film productions. Besides a “National Park elementary school” in Winklarn and a Junior-Ranger programme, there is the “Water school”, a mobile education programme that travels from school to school. There are contests for the best photo from the National Park, the winner gets prizes from the National Park shop. On the homepage there is a specific main point called “Join in”. Here it is possible to apply for a volunteer programme or start an Austrian Alpine Association – sponsorship for the National Park Hohe Tauern. There is also the possibility to become a member of the “Association of friends of the National Park Hohe Tauern” that support the National Park. Big companies are also members there, and sponsor the National Park. The “Friends of the National Park” have their own homepage and are offered a double page in the National Park magazine for their news. Additionally, the Hohe Tauern National Park has several “partner” restaurants, hotels and companies in the region. Both, the “partner” companies and the “Friends of the National Park” have their own logo based on the National Park.

The National Park should be authentic and represent the four official goals of IUCN. This is done successfully on the homepage, where the four goals are in the header, explained by several subordinate points. The whole homepage is available in German and English, with a reduced content, in English There is a comfortable “I want to...” quick navigation function. For visually handicapped people, it is possible to enlarge the text. There are special folders for families (“Hiking with kids”, “Junior Ranger programme”), school classes and teachers (“Project week at the National Park Hohe Tauern”, e.g. “The secret of milk” or in general “Education programme – discover, experience, research”), group trips (“Bustours and annual company outings”), local people and visitors for a day trip (“Hiking bus”, an improved public transport bus system to get to the National Park and excursion starting points), adventurers and young people (“Trekking”, “Seven summits”). For independent and individual planning, visitors can “Rent a ranger” for half a day or the whole day and create their own tour. If a visitor buys a “National Park Region Card” in the Carinthian part, he/she gets discounts on the offers of the national park and throughout the region.

In general, the following recommendations can be used to create a strong brand personality:

- For an expressive but serious appearance, strong and characteristic pictures should be used.
- New and diverse ways of communication should be implemented to reach a broader public. WEB2.0 and Social Media should be offered as virtual possibilities to join in.
- The key messages should be stated more clearly and more often. Only a small number of technical terms should be used and maintained.
- History can be used as an evidence for success if it is presented in an exciting way with lots of pictures and visual effects.
- Innovation requires courage. National parks should be successful through brave actions, commitment and perseverance. Environmental problems should be made visible for the public.
- Pictures and introductions of the whole personnel put a face on the organisation. Public access to as many as possible documents about ongoing work creates transparency.
- Only a few powerful colours should be used and everything should be designed very light and serious. It is important to stick to the design consistently in each material.
- Easy figures and diagrams should be used to illustrate complex topics clearly. Technical terms should always be explained (e.g. in an online dictionary).
- Individual (first) answers should always be sent to customer requests, e.g. a short personal note with postal consignments.
- Quick answers are important for using online correspondence. The contact should be kept and customers should be added to the address lists.

Stakeholder involvement in the marketing and public relations of the PA

For all marketing activities, it is important to take in account the chosen communication target groups. In PAs these are not solely visitors and externals, but also the PA staff, regional stakeholders, and decision makers.

This means that it is most crucial to start all communication measures at one's own organization by informing employees. Afterwards, stakeholder in the region as well as decision makers and politicians should be addressed. Not before this basis is built, it is useful to develop a communication plan for externals and visitors. Although the ways of communication and marketing vary, the message has to stay the same all the time.

Regional development

Marketing, and especially branding, has a very strong influence on regional development because it creates an image of the region beyond PA boundaries. A PA as brand has an identity and specific profile that attracts tourists and is often representing for the whole region. In particular, peripheral regions can profit from an identity-creating attraction. Branding of a PA and its products and services will enhance its level of recognition and embed the PA in the public's perception and awareness and provide continuous information on the activities and values of the PA within the community.

4 CONCLUSIONS AND RECOMMENDATIONS

The current volume highlights the diverse tasks of protected areas (PA) management in the manifold aspects of the “life-cycle” of a protected area from the first idea, the development of a vision and a draft zoning concept, to detailed planning, and the day-to-day management activities. The different fields of activity of PA management exhibit the usefulness of this life-cycle concept which proves to be a concept that is both theoretically founded, integrative and integrated, and practically oriented.

However, the life-cycle concept for PAs also emphasises the broad range of demands and claims addressed to protected areas. While the Convention on Biological Diversity (CDB, 1992) already stressed the importance of benefit sharing in biodiversity conservation, PAs are generally considered as crucial elements in sustainability strategies, at the local and regional as well as at the national and international levels. Many tasks of PA management also involve inter- and trans-disciplinary issues, cross-cutting many professional and academic disciplines. Therefore, in all fields of activity of PA management, it is generally not sufficient to consider solely “ecological” aspects of conservation, but also legal, technical, socio-economic, and cultural issues. It is the very concept of *management* that tries to include all these different aspects. However, it is also important to stress that the conservation of nature is the foundation and the core of any successful protected area, regardless of the significance of the other fields of management activities.

The current volume takes the manifold aspects of PA management seriously, and concentrates on two issues that are of eminent importance: participation and regional development.

Regarding participation, the book emphasises that participation is not an ad-hoc venture of PA managers but needs thorough planning and management. It has to be clarified in which stage of the life-cycle the protected area currently is, and in which intensity stakeholders should participate in the PA process. Several intensities include information, consultation, and actual decision making in a diverse range of formal and informal settings. This is not only crucial for the acceptance of the PA in a region – “wrong” but “well-meant” participation may frustrate expectations, decrease acceptance and even destroy a productive process of com-

munication and decision making –, but can also lead to significant losses both of money and other resources. PA managers have to bear in mind that they are “solicitors” of the natural capital towards the current and future generations, and that they decide on the use of scarce resources such as biodiversity, land, time of PA staff and stakeholders, and public money. One major conclusion that can be drawn on the basis of the current volume is that it is advisable that there is rather no participation than a form of participation which is insufficiently planned and managed. The “currency” of participation is trust, and this currency may be easily devalued with inadequate participation.

The second major issue in the current volume refers to regional development. We show that in each of the fields of activity of PA management, regional development (in its broadest sense, including economic, social and cultural development) can be enhanced and encouraged. All major studies show that protected areas do not hinder regional development. They rather increase or at least stabilise regional production (value added) and employment (e.g. number of jobs available). However, regional development in the context of establishing a protected area is a long-term goal and commitment that needs long-term regional strategies, and support by all involved stakeholders inside and outside the protected area.

These two major issues of PA management show that – compared to today’s endowment of PAs with staff, capacity and money – achieving participatory decision making and promoting regional development needs a significant new commitment of governments not only in developing or transition economies but also in industrialised countries. Capacity building is not only advisable for PA staff, for instance by vocational training and by adapting curricula at universities (e.g. in ecology, landscape planning, regional planning, biology), but is also essential for the full range of stakeholders, of course, to a varying extent. To make protected areas a success in terms of sustainable development, stakeholders have to build up their capacity for dealing with the complex issues. Protected areas can significantly contribute to these learning processes. It becomes clear that the professional labour market for PA managers has to be developed further, and that entering the nature conservation labour market needs career development opportunities in order to attract more experts and managers to the interesting field of PA management. Furthermore, enhancing regional development and participation also presupposes that governments and the private sector are committed to sufficient and adequate financing of protected areas.

While the current volume presents a broad range of best-practice examples of PA management from all over the world, there is still a wide lack of concrete scientific impact studies, consistent data on regional development, and benchmarking and standardised information on participation processes. Further research activities and emphases are clearly needed to develop scientific evidence on the

extent, the range and benefits of participation. Long-term monitoring of participation models would also be an interesting new field of work.

Protected areas can thus also function as experimental regions for innovation for sustainable development, for instance, regarding the complementarities of nature conservation and economic development. The empirical though unsystematic evidence presented in this book shows that the diversity of management approaches pursued in the different protected areas leads to new knowledge about the sustainable management of natural resources, and that protected areas can indeed function as cornerstones for sustainability both for the current and future generations.

5 ANNEXES

5.1 References, tables, figures, boxes, and photo credits

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5.2 Participation methods and their use

To steer a participation process, different methods can be applied. The following Figure 50 provides an overview on different participation methods and their use.

ANNEXES

METHOD	duration	group size	degree of stakeholder variety	degree of procedural effort	degree of making decisions	degree of generating ideas	degree of solving conflict
Activating opinion survey	●	●	●	●	●	●	●
Advocacy planning	●	●	●	●	●	●	●
Agenda Conference	●	●	●	●	●	●	●
Citizen jury	●	●	●	●	●	●	●
Citizen panel	●	●	●	●	●	●	●
Community Organizing	●	●	●	●	●	●	●
Consensus conference	●	●	●	●	●	●	●
Cooperative discourse	●	●	●	●	●	●	●
Delphi survey	●	●	●	●	●	●	●
Dialogue	●	●	●	●	●	●	●
Dynamic Facilitation	●	●	●	●	●	●	●
Fish Bowl	●	●	●	●	●	●	●
Focus Group	●	●	●	●	●	●	●

Figure 50 continued on the next page.

Figure 50 continued.

METHOD	duration	group size	degree of stakeholder variety	degree of procedural effort	degree of making decisions	degree of generating ideas	degrees of solving conflict
Future conference	●	●●	●●	●	●●	●●	●
Future workshop	●	●	●●	●	●●	●●	●
Internet forum	●●	●●	●	●	●	●	●
Mediation	●●	●●	●●	●	●●	●	●●
Neosocratic dialogue	●	●	●	●	●	●	●
Open space conference	●	●●	●●	●	●	●●	●
Planning for real	●	●	●●	●	●●	●	●
Round Table	●●	●	●●	●	●●	●	●
SEA Round Table	●●	●●	●●	●●	●●	●	●
Simulation Game	●	●	●●	●	●	●	●
Wisdom Council	●	●	●	●	●	●	●
Workshop	●	●	●	●	●	●	●
Worldcafé	●	●●	●●	●	●	●●	●

Figure 50: Participation techniques and usefulness of instruments

Source: Authors' draft based on Lebensministerium 2010

The size of the bullets represent small/medium/large importance, impact or usefulness of participation techniques in PA management:

duration

up to one week / some weeks / several months

group size

up to 15 / 30 / or more people

degree of stakeholder variety

one / some / all groups involved

degree of procedural demand

low / medium / high efforts needed to prepare and manage process

degree of making decisions

informing / consulting / deciding

degree of generating ideas

exchanging ideas / developing and planning / creative solutions

degree of solving conflicts

high / medium / low potential to solve conflicts

According to Austrian Ministry of the Environment 2010 (Lebensministerium, 2010), the methods can be described as follows:

- Activating Opinion Survey: In an activating opinion survey stakeholders are asked about their views and attitudes; at the same time they are encouraged to stand up for their interests and to take part in developing solutions for their surroundings.
- Advocacy Planning: In this participation method, which originated in the USA, an “advocate“ (not in the legal sense; usually a planner) gives ordinary citizens expert advice in planning matters, assists them and represents them before official bodies at communal and state level
- Agenda Conference: This is a method which has evolved out of the Local Agenda 21 process; it is used to take stock of the current state of an ongoing process, to assess it jointly, to define goals for the future and to launch campaigns. It is suitable as a starting-point for a participation process, or where a process has got bogged down, or when a new phase is to be started
- Citizen Jury: In a citizen jury individuals selected at random (not as representatives of organizations) draw up a “citizens’ assessment“ of a particular issue, based on their own experience and knowledge. The participants make their recommendations and assessments from the point of view of the common weal; on the jury they do not represent any special interests. Experts provide assistance with specialized aspects.
- Citizen Panel: Citizen panels provide an opportunity to inform those interested in / affected by a project and to discuss its various aspects in public
- Community Organizing (by Ulrike Schumacher): Community Organizing takes place in neighbourhoods, towns, communities or regions. Building relationships and a culture of self-determination and reaching decisions democratically helps citizens to act together and to contribute to solving problems in their surroundings.
- Consensus Conference: In a consensus conference selected heterogeneous groups of ordinary citizens engage in intensive dialogue with experts to find an answer to a question that arouses political or social controversy
- Cooperative Discourse: Cooperative discourse is a combination of elements of mediation, of the Delphi survey and of the citizen juries aimed at solving planning assignments.
- Delphi Survey: A Delphi survey (also known as a Delphi procedure) is a systematic multistage process in which experts are polled on specific topics.
- Dialogue: Dialogue is intended to produce a common denominator or something new, for a group. It is not about exchanging views, but about identifying the assumptions and value judgements that underlie the views.

- Dynamic Facilitation: Dynamic Facilitation is an open, chaired group discussion with a variable number of participants, ideally between 8 and 20. The method relies on the participants' creativity in finding a solution, and deliberately avoids conventional, linear facilitation structures.
- Fish Bowl: Fishbowl is a simple but dynamic alternative to a panel discussion, combining a large-scale format with the advantages of discussion in small groups; this gets a lively atmosphere and spontaneity into conventional event set-ups
- Focus Group: In a focus group 8 to 15 persons take part in a chaired discussion on a predetermined topic; this can lead to a cohesive “group view” developing. The method originated in the field of market research, where it is used to test products and advertising strategies (among other things)
- Future Conference: At a future conference participants selected from all the interest groups affected draw up programmes and action plans for forthcoming projects in line with a predetermined schedule. At a future conference participants selected from all the interest groups affected draw up programmes and action plans for forthcoming projects in line with a predetermined schedule.
- Future Workshop: In a Future Workshop the participants are encouraged to develop imaginative, unconventional solutions to issues of current interest, by means of an atmosphere designed to promote creativity
- Internet Forum: Internet fora are on-line discussion platforms that give ordinary citizens the chance to express a view on a particular issue in writing and to discuss the issue with others.
- Mediation: Mediation is a voluntary process with a clear structure, in which the parties to a conflict search for a permanent solution with the support of professional mediators
- Neosocratic Dialogue: Neosocratic dialogue is an instrument for discussing very general, basic questions, usually of an ethical-philosophical nature, with ordinary citizens
- Open Space Conference: At an open space conference there is a central issue, but no set speakers or pre-arranged study groups. The participants decide themselves who wants to tackle which topic for how long
- Planning For Real: Planning for Real is a community-oriented planning procedure designed to activate people (the idea is “It’s our place – let’s take matters into our own hands”). The aim is to lessen difficulties in communicating between individuals affected in different ways, to bring out latent potential, resources and deficits, and to create an atmosphere of cooperative action among neighbours, experts and local interest groups.

- Round Table: At a Round Table representatives of the interest groups affected by a project discuss a material issue on a level footing and try to find a common solution
- Sea Round Table: A Strategic Environmental Assessment (SEA) Round Table is a special form of >>SEA, in which participants from the interest groups affected, administrators and external experts collectively draw up a plan or programme (e.g. for handling traffic or waste management etc.).
- Simulation Game: This method is designed to help the participants understand the complexities of everyday reality in a simulated (and simplified) situation and to recognize system-immanent constraints, options, consequences and alternatives.
- Wisdom Council: A Wisdom Council is a simple, inexpensive and rapid way of boosting ordinary citizens' ability to organize themselves and to shoulder responsibility
- Workshop: A workshop is an informal, occasion-related procedure in which politicians, administrators, experts, property owners, investors and other stakeholders discuss a concrete issue together.
- World Café: This method is designed to start, in a relaxed setting reminiscent of a coffee-house, a creative process spread over several sessions that promotes an exchange of knowledge and ideas among those taking part, and thus leads to new insights.

5.3 The NATREG project¹¹

The idea for the NATREG project was brought up by the “MATRIOSCA” group of which many partners from the SEE region (South Eastern Europe) had identified similar obstacles and problems during their work (Matriosca, 2010). Most common were the manifold stakeholder interests, management planning approaches, and almost complete lack of cooperation between different economic sectors. The name of the NATREG project itself represents the main challenge of “Managing natural assets and protected areas as sustainable regional development opportunities” with its identification motto of “Development with nature”.

The NATREG project had therefore started out with its principal objective of bringing as many efforts as possible together for creating a “Joint Strategy for Integrated Management Planning for Protected Areas” (JSIPMA) by a range of different but complying work packages (introductory handbook on PA manage-

¹¹ The text for chapter 5.3 was provided by G. Danev.

ment planning as an important outcome of the NATREG project; cf. Danev, 2010).

One major particularity of this project lies in its diverse protected areas participating, among others, Natura 2000, IBA, and EMERALDS sites. Typical but different SEE ecosystems (Alps, sub Alpine region, Adriatic coast, Drava river basin, desert on Danube river bank) were selected from Italy, Austria, Slovenia, Croatia and Serbia because the Joint Strategy should be applicable to diverse site related specifics of the South East Europe.

As our project results should be sustainable in the long term (e.g. stakeholders' acceptance of the project implementation), it is of crucial importance to involve all relevant stakeholders to the decision making process (an outcome of the NATREG project are guidelines for involving stakeholders in the planning and management process; cf. Marega, 2010). According to the project's communication strategy, each pilot area prepared its 'site communication plan', adjusted to the site-specific demands, characteristics, and existing plans. These site communication plans consist of integrated graphical images for recognition, specific communication tools, distribution channels, time frame, and monitoring. Project brochures and local information materials are disseminated among stakeholders in order to present the whole project and its processes.

Thus several organised workshops with stakeholders in each pilot area will help us gain the stakeholders' opinions on development opportunities and disadvantages. The ultimate goal of the project is an establishment of concrete projects, and interregional, regional, national and local stakeholder networks. Recognising best practice case studies is a task of each project partner during the project implementation in order to gain experience and knowledge. Today's importance of nature in everyone's life is obvious, but it is hard to assess the economic value of conservation, or of biodiversity loss. One of project aims is therefore to draft guidelines for the economic evaluation of natural assets in protected areas (Ruzzier et al., 2010a), and guidelines for the preparation of business plans for protected areas (Ruzzier et al., 2010b). Both guidelines are to be "tested" in the frame of the project implementation, and afterwards are to serve relevant sectors (e.g. parks) to support management planning.

As communication and participation are vital for effective and efficient protected area management, several trainings for different stakeholders and sectors are organised at the project sites in order to jointly learn how to work together on "Integrated Management Plans" for the pilot areas, and on the connectivity between the Natura 2000 sites by means of an "Integrated Development Strategy for Green Networks of PA" (Griesser and Wieser, 2010).

Last but not least, the goal of the NATREG project is the establishment of several follow-up projects in order to enable the project's and protected areas' life

cycle to continue after the project conclusion in July 2011, making results sustainable and long-term effective.

Project overview: NATREG – Managing Natural Assets and Protected Areas as Sustainable Regional Development Opportunities

Project homepage: www.natreg.eu

Lead partner: Zavod Republike Slovenije za varstvo narave/Institute of the Republic of Slovenia for Nature Conservation, www.zrsvn.si

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Partners:

- Ministry of the Republic of Slovenia for Environment and Spatial Planning;
- Regional Environmental Centre, Slovenia;
- Regional government of Carinthia, Office for Nature Conservation, Austria;
- Regional government of Styria, Office for Spatial Planning and Regional Development, Austria;
- Regional government of Veneto, Office for Spatial Planning and Regional Development, Italy;
- Environmental Agency of the Emilia Romagna region, Italy;
- Klagenfurt University, Department of Economics, Austria
- Institute for Spatial Planning of the Koprivnica region, Croatia;
- Institute for Nature Conservation of the Koprivnica region, Croatia; and
- Vojvodinašume public enterprise, Serbia.

5.4 The M.Sc. programme “Management of Protected Areas”

Promoting sustainability, handling conflicts, increasing benefits, conserving biodiversity – the planning and management of Protected Areas involves many different legal, administrative and technical realities. The demand for highly skilled experts is growing immensely.

Our vision is to promote biodiversity conservation and regional sustainable development in Europe and worldwide by educating and training efficient and effective managers of Protected Areas (Figure 51).

The learning goals are:

- an excellent and comprehensive understanding of the aims and roles of Protected Areas in relation to the conservation of biodiversity and (integrated) regional development.
- detailed knowledge when applying the full range of tools available for the management of Protected Areas so that they can effectively fulfil their aims.
- an ability to analyse and solve problems encountered when establishing, planning and managing Protected Areas, to conduct inter- and transdiscipli-

nary dialogues with all stakeholders and to develop and implement appropriate integrated solutions.

- the development of hard and soft skills to create mutual benefits of nature conservation on the one hand, and for the local population on the other hand, particularly in peripheral regions as well as in developing countries with the aim of sustainable regional development.

The management of Protected Areas is considered in an integrating way. The management shall account for all three “pillars” of sustainability to make Protected Areas to regional “cornerstones” of global sustainable development



Figure 51: The Klagenfurt Approach

The lecturers of this program are internationally acknowledged experts from organisations and institutions. By attending the programme, the participants become part of an international network of experts that enables them to solve the complex problems in everyday life in Protected Areas.

1st term: Theoretical and scientific fundamentals of the management of Protected Areas

2nd and 3rd term: Practical aspects of the management of Protected Areas (toolbox & best practice)

4th term: Supervised implementation of applied and/or scientific research projects

The programme has a focus on:

- European and international categories of Protected Areas
- Nature conservation strategies in Central and Eastern Europe
- Integration of socio-cultural, economic and ecological aspects
- Participative approaches in the management of Protected Areas
- New technologies and methods
- Strategies and instruments for communication, participation and benefit sharing.

The MSc programme is set up in cooperation between the University of Klagenfurt and E.C.O. Institute of Ecology, a company specialised in planning and consulting Protected Areas (PA). An international Advisory Board is established in order to support and control the quality of courses and theses. The programme's patron is Prof. Michael Succow, holder of the Alternative Nobel Prize 1997, who has said that, "the M.Sc. programme 'Management of Protected Areas' is an outstanding and innovative educational offer intended for managers and planners of Protected Areas. It not only provides important training but also professional impetus for nature conservation in Europe".



Michael Getzner is professor of public finance and infrastructure policy at the Vienna University of Technology, and served as an associate professor of economics at Klagenfurt University from 1997 to 2010. His main fields of research are public finance, infrastructure policy, ecological economics, and regional policy. From 2004 to 2010, he was also the director of the post-graduate (M.Sc.) study programme “Management of Protected Areas” at Klagenfurt University.



Michael Jungmeier is CEO of E.C.O. Institute of Ecology in Klagenfurt, and also university lecturer at several universities. The company is specialised on planning and consulting protected areas, mainly in Europe, but also in Central Asia and Africa. Mr. Jungmeier is expert in communication and participation design, the interface between biodiversity conservation and regional development. Since 2004 he is co-director of the MSc. Programme “Management of Protected Areas” at Klagenfurt University.



Sigrun Lange holds a diploma degree in biology (University of Bayreuth, Germany) and a MSc degree in protected areas management (University of Klagenfurt, Austria). Since almost 20 years she works in the field of biodiversity conservation management and public relation, with field experiences in Papua New Guinea, Kenya, Ecuador, and Peru. Since seven years she deals with the broad field of protected areas management with particular focus on biosphere reserves and transboundary cooperation. As of 2008, she is CEO of E.C.O. Germany (Munich) specialised on communication, management and planning processes in protected areas. She is honorary communication coordinator of the Alumni Club of the MSc Programme ‘Management of Protected Areas’ and also gives lectures in this international course.

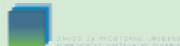


MSc Management of Protected Areas



This publication is partially financed by the NATREG project. The NATREG project is financed by the South East Europe Transnational Cooperation Programme.

The NATREG project partners are:



ISBN 978-3-7084-0413-4



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