

# PARKS 3.0

## Protected Areas for the Next Society

Heike Egner  
Michael Jungmeier (eds.)



# Parks 3.0 – Protected Areas for the Next Society

Sigrun Lange, Michael Jungmeier



# Parks 3.0 - Protected Areas for the Next Society

Sigrun Lange, Michael Jungmeier

Series: Proceedings in the Management of Protected Areas, Vol. 6

Series editors: Heike Egner, Michael Jungmeier







**M P A**

**E C O**

**Title page:**

© Binding-Preis (2012)

© by Verlag Johannes Heyn

Klagenfurt, 2014

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

ISBN: 978-3-7084-0528-5

*“The next society will be sustainable or there will be no society“  
(Andrej Sovinc)*



## FOREWORD

This year's World Park Congress in Sydney provided us with the reason for and the opportunity of raising questions about the future: What do protected areas look like in the 21<sup>st</sup> century? Can we recognize the outlines of a new generation of protected areas? Can protected areas evolve into innovation regions balanced between persistence and avant-garde? How can protected areas turn into cornerstones of ecological globalisation and can these sites really become fields for experimenting with new forms of community? Based on these questions, we invited selected European experts to join the debate.

You are holding the results in your hands. Taking 23 hypotheses as a point of departure, this journal discusses and illuminates the prospects, contradictions and problem areas with which protected areas will be faced in the coming decades. As one would expect, the experts represent different standpoints. What all of the contributions have in common is a plea for innovation and the high expectations they have of the unfolding potential of the protected areas. If the selection of experts has produced a specifically European perspective, this is both justifiable and intentional.

In volume VI of the "Proceedings in the Management of Protected Areas" we present not the results, but rather a possible seedbed for the development of a more broadly scoped discussion of the future. We cordially invite our colleagues across the world to take part. Your feedback will be collated and considered further as part of the international degree programme "Management of Protected Areas" ([www.mpa.uni-klu.ac.at](http://www.mpa.uni-klu.ac.at)).

As the publishers, we hope to spark some interesting discussions with this book. We would like to thank every author and commentator for their contributions. Our thanks also go to the Bristol Foundation, which has made this discussion of the future possible.

*Heike Egner  
Head of the Institute of Geography and Regional Studies at the  
University of Klagenfurt, Austria*

*Michael Jungmeier  
CEO of E.C.O. Institute of Ecology, Austria; Senior Scientist at the Institute of  
Geography and Regional Studies, University of Klagenfurt*



# CONTENTS

FOREWORD .....	5
CONTENTS.....	7
1 INTRODUCTION: PARKS BETWEEN YESTERDAY AND TOMORROW.....	9
2 DEVELOPMENT TOWARDS THE PARKS OF THE FUTURE.....	11
2.1 Challenges in the next society .....	11
2.2 The development towards Parks 3.0.....	12
3 EXPERT DISCUSSION ON THE HYPOTHESES .....	15
3.1 Interrelation between society and protected areas .....	15
3.1.1 The next society .....	15
3.1.2 Parks 3.0 .....	17
3.2 Conservation focus .....	19
3.2.1 Closing the gaps .....	19
3.2.2 Limits to growth.....	21
3.2.3 Post management .....	23
3.2.4 New subjects requiring protection.....	25
3.3 Social perspectives .....	27
3.3.1 Sustainability.....	27
3.3.2 Governance .....	28
3.3.3 Empowerment .....	30
3.3.4 Innovation .....	32
3.3.5 Knowledge management .....	34
3.3.6 Future platform .....	35
3.3.7 Regional fractals .....	37
3.4 Economic perspectives.....	38
3.4.1 Economics rooted in protected areas.....	38
3.4.2 Benefits .....	40
3.4.3 Return of the public contract.....	41

3.5	Management perspectives .....	43
3.5.1	Systematic learning .....	43
3.5.2	Extreme planning .....	44
3.5.3	New spatial patterns .....	45
3.5.4	Speed breakers .....	46
3.5.5	Synthesis categories .....	48
3.5.6	System research.....	49
3.5.7	Fully interactive .....	51
4	VIEWPOINTS OF GUEST COMMENTATORS .....	53
4.1	We have failed so far.....	53
4.2	We need more innovation! .....	56
4.3	A continuous process.....	59
4.4	Sustainability, good governance and benefit sharing.....	60
4.5	The “ideal” protected area.....	63
5	CONCLUSIONS AND RECOMMENDATIONS .....	65
6	LITERATURE .....	71
7	PARTICIPATING EXPERTS AND AUTHORS .....	73
7.1	Abbreviations of commenting experts.....	73
7.2	Information on the authors .....	75
7.3	Information on the commenting experts and guest commentators.....	76
	THE KLAGENFURT MPA PROGRAMME .....	89
	INFORMATION ON THE SERIES .....	93

## 1 INTRODUCTION: PARKS BETWEEN YESTERDAY AND TOMORROW

Just like Dolly the clone sheep, Frank Sinatra, cubism, and the landing on the moon, national parks, nature parks as well as biosphere reserves can be regarded characteristic features of the 20<sup>th</sup> century. Back then, in every country across the world, particular habitats and ecosystems have been declared protected areas. Towards the end of the century, supranational agreements, international NGOs, and the global development of environmental awareness further accelerated the appearance of protected areas. It is astonishing, that parks have been designated worldwide, regardless the social system, ideology, and regime. Today, more than one tenth of the terrestrial area is covered by protected areas. The concept of nature protection in the 20<sup>th</sup> century represents the success story of an idea: Nature also needs room on a planet with less and less space.

Since then, protected areas such as Serengeti, Yellowstone, the Lake District, the Galapagos Islands or the Great Barrier Reef are well-known worldwide. They have become familiar to many of us and developed as important brands. They will not be missing in any tourism brochure showing the most important places of interest. Many parks have become integral components of regional identity, and are considered to be typical for the respective country and its people. Meanwhile, the management systems of protected areas developed towards large organisations. Disadvantaged regions and communities can seek important future prospects in parks as “landscapes of hope” (Mose 2007). Pioneers working in nature protection at the beginning of the 20<sup>th</sup> century probably would not have dared to imagine such a development.



*The Galápagos Islands are famous worldwide for their vast number of species, such as the marine iguanas (© S. Lange).*



Step by step, historical research is revealing the roots of nature conservation. What is emerging is a many-layered conglomerate of different ideas and approaches. The “protection of native species against the infiltration by foreign species” is one of the common notions, “allowing natural processes” is another one. It seems that nature conservation is a concept of contradictions, which (may?) stand alongside each other unresolved. Currently, protected areas are the flagships of the nature conservation movement. Thus, they are the pillars and the proponents of these inherent contradictions.



*Removing alien species and allowing dead wood in the forest – both measures are considered nature conservation activities (left: © E.C.O. Institute for Ecology; right: © S. Lange).*

Technological revolutions, demographic trends and new forms of knowledge work define the corner points of fundamental social change. This is linked to insecurities and shifting perspectives. In contrast, national parks, biosphere reserves and world heritage sites stand for continuity. They represent a significant legacy and are perceived as resting and anchor points. Nevertheless, they are facing new challenges. Looking ahead into the 21<sup>st</sup> century: What trends and developments can we expect? Will our common tools still be useful in the future? Is the concept of designating protected areas still relevant, even though it originated in a time of horse-drawn coaches, Morse code devices and imperial dynasties? The hypotheses that follow below in chapter 3 should serve to open up a future debate.

## **2 DEVELOPMENT TOWARDS THE PARKS OF THE FUTURE**

### **2.1 Challenges in the next society**

“Times change, and we must change with them.” Drucker (2007) explored the fundamental changes that are being wrought upon society and the economy by the new media, in particular by the Internet. In this context he coined the term of a “next society”: Just as the expansion of the railroads opened the way to (or enforced) entirely new economic and social patterns and developments in the nineteenth century, the same can be said of today’s communication technologies. “In the new mental geography created by the railroad, humanity mastered distance. In the mental geography of e-commerce, distance has been eliminated. There is only one economy and there is only one market”. This global market of products, services and ideas adheres to new laws; in particular, it is necessary, according to Drucker, to let go of the notion that the complexity can still be managed. “When we talk about the global economy, I hope nobody believes it can be managed. It can’t.”

In the course of his deliberations, Drucker describes many phenomena, which are also of great significance for the management of conservation areas. For example, he emphasises the need for new kinds of governance. “In my view,... more and more of the input we need will not come from people or organisations that we can control, but from people and organisations with which we have a relationship, a partnership – people whom we cannot command.”

Of course, in this context, Drucker is referring to (large) business enterprises; however, the statement is undoubtedly also true for parks. Today, they operate far beyond the narrowly defined borders of a public administration organisation. “Modern government needs innovation. What we have now is roughly four hundred years old. The invention of the nation-state and of modern government in the closing years of the sixteenth century was certainly one of the most successful innova-

tions ever. Within two hundred years they conquered the globe. But it's time for a new way of thinking."

Drucker also established the term "knowledge worker", which is very helpful for describing the kind of work that is typical for a modern protected area: No other type of institution exists that accumulates more regional knowledge about the natural space and about sustainability than a protected area. This applies to an even greater degree to the worldwide networks of protected areas (cf. Huber et al., 2013).

The increasing importance of civil society was also clearly recognised by Drucker, and was neatly encapsulated as follows: "We now know that we need three sectors, not two – not just government and business, but what people now call the civil society or third sector in between". In many European countries, the parks and conservation areas represent the result of the extended efforts of civil society, over years and even decades. Many parks are manifestations of the above-mentioned third sector. Ultimately, Drucker asks the same question that many parks are also pondering: "What other big changes may lie ahead of which we are as yet unaware?"



*The opinion of civil society is becoming more and more important, when decisions upon future developments have to be taken. Here stakeholders are discussion nature conservation strategies in an Austrian nature park (© E.C.O. Institute for Ecology).*

## **2.2 The development towards Parks 3.0**

As demonstrated by Drucker (amongst many others), society is undergoing constant changes which impact on the conservation of nature in general, and on the management of protected areas in particular. Over the past 40 years, several changes occurred in our thinking and practice towards protected areas. The significance

of a bunch of different changes (each on its own largely unnoticed) can be traced in the decisions of the past world parks congresses. Step by step, a new paradigm for protected areas in the 21<sup>st</sup> century was produced (Phillips 2003). The traditional prohibitive top-down approach (first generation) successively gave way to an integrative management of protected areas in close cooperation with related stakeholder groups (second generation). Human beings are no longer strictly excluded, but seen as an integral part of the park management. The main function of protected areas, the conservation of biodiversity, was extended to the new function of sustainable development.

Quite recently, Jungmeier (2011b) observed new developments, constituting eventually a third generation of protected areas. The constituting parameters of the three generations of parks are presented in Fig. 1. Most distinctive are the steering mechanisms deriving from the principles of public administration to management and finally to governance, upgrading the people concerned to become stakeholders and finally owners. In many cases this may lead back or at least refer to traditional forms of organising common land. Generally, the increased complexity is a challenge for managing, planning and consulting protected areas (Jungmeier 2011b).

	<b>1<sup>st</sup> Generation</b>	<b>2<sup>nd</sup> Generation</b>	<b>3<sup>rd</sup> Generation (Parks 3.0)</b>
<b>Approach</b>	static	dynamic	integrated
<b>Concept</b>	segregation	balance	integration
<b>Motivation</b>	ethic, romantic	emotional, ethic-political	rational, evidence-based
<b>Steering</b>	public administration, top down, regulating	management, top down and bottom up, mediating	governance, network, stimulating
<b>Aim</b>	species, habitats, sceneries	land-use and ecosystems	socio-sphere in eco-sphere
<b>Disciplines</b>	natural sciences	natural sciences, economics, (human & social sciences)	natural sciences, economics, human & social sciences, planning techniques, philosophy & cultural sciences
<b>Principles</b>	long-term perspective, internationality, global perspective, ethically based approach	sustainable development, internationality, global perspective, benefit sharing, participation, governance, long-term perspective, knowledge management	sustainable development, internationality, global perspective, inter- & transdisciplinarity, ecological and economic effectiveness, benefit sharing, participation, governance, long-term perspective, ethically based approach, knowledge management
<b>Process</b>	constant	cyclic	?
<b>Complexity</b>	low	high	very high
<b>Staff</b>	sectoral experts	multisectoral experts / managers	interdisciplinary managers
<b>Education</b>	sectoral	(autodidact)	specific education / training
<b>References</b>	Lane 2010 Weixlbaumer 1998	Lane 2010 Weixlbaumer 1998 Imboden 2007 Mose 2005	Imboden 2007 Getzner & Jungmeier 2009 Jungmeier 2011a

*Fig. 1: Constituting elements of three generations of protected areas (Source: Jungmeier 2011b).*

23 hypotheses, related to the understanding of the potential third generation of protected areas which we here call Parks 3.0, have been formulated by Michael Jungmeier to trigger a discussion on the outlines of the future of protected areas in the 21st century.

### 3 EXPERT DISCUSSION ON THE HYPOTHESES

In an open call, nature conservation experts from all over Europe have been invited to discuss the 23 hypotheses on the future of protected areas. 31 experts from nine European countries responded. They cover different scientific disciplines (e.g. biology, ecology, geography, forestry, agriculture, and social sciences) and different fields of activity (e.g. park management, administration, NGOs, science, and consultancy). About one third of them are females. Older and younger experts participated comparably. Furthermore, different hierarchical levels, from directors of high ranking international institutions to staff members of parks, are represented in the survey. With this selection of experts a broad spectrum of different visions on the future development of our parks could be covered. Their interesting thoughts can be found in the following chapters.

#### 3.1 Interrelation between society and protected areas

##### 3.1.1 The next society



*H1: A society in transition needs protected areas to accept new functions and to develop new forms of performance delivery. The protected areas of the future can offer so much more than their creators, the nature conservationists, ever dared to hope.*

*Results of the expert discussions:*

It was questioned if we know enough about the hopes and intentions of the former creators of protected areas. Probably already in the past there have been different purposes for the establishment of parks, e.g. the maintenance of exclusive hunting grounds, the protection of outstanding landscapes, the conservation of

particular charismatic species, or the development of rural areas (LS). Further, it was argued that currently we might not be able to assess how the next society will look like. Throwing a glance at school children might give us an idea of the preferences of future societies. It seems that prospective parks will have to compete with the experiences offered by the virtual era, and therefore will have to get rid of outmoded behaviour, structures and methods (MM). It was predicted, that future generations might be more and more separated from nature, but at the same time more and more searching for nature experiences as sources for inspiration or recreation. Thus, new methods for interpretation will be required (SJ).

Most experts agreed that our society currently is and always will be in transition (EH, PC, LA, IA, PKC). In contrast, the functions of protected areas are expected to remain more or less stable (PC, LA), although their tasks are gradually increasing: Protected areas are no longer strict reserves, excluding people for the benefit of nature, but large areas where nature is allowed to “breathe”, while still providing services and recreational space for people (TJ). In the future, the pressure on protected areas will probably rise, for instance because of climate change, an increasing scarcity of resources, and the worldwide search for alternative energy sources mitigating global warming (FKM, PD). Hence, on the one hand, parks will be needed as reference areas for undisturbed “nature”. On the other hand, they are expected to demonstrate how sustainable land-use forms may contribute to nature conservation (RB, SE). Biosphere reserves in particular are seen as “model regions”, indicating a way towards sustainability, and delivering effects even beyond their borders by transferring good practices, replicable approaches, and policy advises to neighbouring regions (PP-2). Therefore, park managers are increasingly requested to cooperate with manifold stakeholder groups and maintain a close contact with the people living in and around the protected areas. Networking, communication processes and bottom-up approaches are considered key elements of the current and future park management (RL, PP).

However, it seems to be dangerous to extent the expectations towards protected areas too much. They cannot be much better than the socio-political systems they are embedded in. This rather might be a utopia, a heterotop, in terms of Foucault (LS). It is a nice vision that parks might stimulate societal change. But probably they are always just mirroring the attitudes and values of the current society (PP, IA). Expecting that they “*offer much more than their creators ever dared to hope*” is probably related to their new sustainable development function, which quite often simply means less nature conservation (SKS). This is probably true as long as society still considers economy to be the basis for human development. Once socie-

ty starts to accept the natural resources being the basis and framework for any social and economic development (SE), parks might become true models for sustainability, showing that people have to sacrifice some commodities in order to maintain high standards of nature conservation (SA).

Parks of the next generation might be compromises between environmental protection and economic development, facing the pending danger that their conservation function is neglected in favour of their development function (PG, KY). Alternatively, we might experience a shift from protected areas to “sustainably used green areas” on the one hand, and “wilderness areas” on the other hand, which are so large that they need no particular management or protection (MM-2).

### 3.1.2 Parks 3.0



*H2: The understanding of parks, their aims, responsibilities, and methods is subject to continuous change, sometimes shifting by leaps and bounds, sometimes charging ahead of the spirit of its time, and sometimes lagging behind. Today, we can observe the emergence of a new generation of protected areas, their out-*

*lines just becoming visible: we call them “Parks 3.0”. Whereas the first generation of parks operated (or still operates) on the principle of command and control, the second generation is target, problem und solution oriented. The development of Parks 3.0 is a process that meanders along the path of three principles: sustainability, good governance and benefit sharing.*

#### *Results of the expert discussions:*

This hypothesis was very controversially discussed. The assumed succession of three generations of protected areas was questioned (RB). Besides, it was criticised, that the concept of Parks 3.0 remains pretty undefined. It seems to be a very general kind of postmodern approach for problem resolution, or maybe an instrument for regional development under the command of nature conservation. However, experience showed us, that uncertain concepts – such as the concept of sustainable development – are dammed to become paper tigers. Therefore, the concept of Parks 3.0 has to be sharpened and it should not be branded with the label of an ultimate solution bringer (WN).



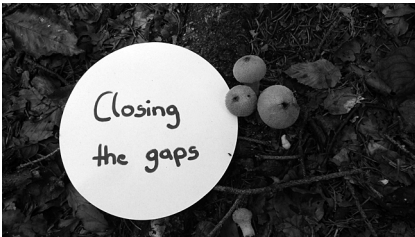
The described core processes of Parks 3.0 were regarded as too simplistic since sustainability, good governance, and benefit sharing can hardly be considered new aspects: This type of parks already exists. Even in the past, the development of some protected areas (e.g. the French regional nature parks) has been guided by such principles (KY, MM-2). In fact, the notion of Parks 3.0 sounds like good practice of sustainable land use planning and resources management – thus, nothing new, but rather mainstream. Many questions remain, for example: How to address conflicts? How to make the local society 3.0 defending “their” park against present and future pressures? How to (self-)organise sustainable development in a regional context (PD) and thus avoid that sustainability remains only a myth (PC)? Generally, sustainability, good governance and benefit sharing are indeed important pillars of modern parks, in particular of biosphere reserves (RB). But new aspects have to be equally considered, e.g. the handling of commons, the provision of ecosystem services, and the development of local identity (including spiritual values) and ownership (ST, SS). Finally, it was doubted if the principles of Parks 3.0 are applicable to parks all over the world. In regions with growing population pressure, being caught in military conflicts or fighting the effects of serious natural disasters, the principles of Parks 2.0 or 1.0 probably will still be in effect for a long time (MM).

Although ambitious, most experts considered stakeholder participation and benefit sharing to be key elements of Parks 3.0 (SS, TJ, SE, PP, BR). With the development of the worldwide web, information flows are expected to be facilitated which allows for an involvement of the greater public (BR). In a world with millions of people still dying of hunger, benefit-sharing is a concept which needs to be developed further. Protected areas shall contribute to poverty alleviation instead of threatening the livelihood of the rural poor even further by limiting their access to nature. Besides conservation functions, Parks 3.0 shall adopt social functions by employing, feeding and protecting poor locals and allowing them to use the natural resources inside the park (TJ). It was mentioned, that particularly in Africa, including humans into the development and management of parks and reserves is the only successful way out of poverty and environmental degradation (BKS). However, the concept of benefit-sharing shall not only be constrained to a support for marginalised communities. In fact, particularly in biosphere reserves an exchange should occur at least on three levels: locally (benefit for communities in the reserve), within the international network of biosphere reserves (sharing of experiences, learning from each other to reinforce the network and its outreach), and outside the UNESCO network (impacting decision making and policies both at national and international levels) (PP-2). For some, the fear remains that stakeholder involve-

ment and benefit sharing might water down the primary function of protected areas which is nature conservation (PP). In the case of strict nature reserves, for example, stakeholder needs shall not be in the front. If conservation shall be successful, unpopular decisions need to be taken from time to time. In these cases, compromises cannot be afforded (TJ).

## 3.2 Conservation focus

### 3.2.1 Closing the gaps



*H3: Many parks are not located where they are needed, but instead they are located where their establishment has been possible. In contrast, Parks 3.0 will be located at the centres of biodiversity, in the conflict zones of competing interests, in urban and peri-urban spaces and in Earth's oceans.*

#### *Results of the expert discussions:*

Many experts agreed that focusing on the protection of biodiversity hotspots would be highly desirable (PP, TJ, MR, KG, BKS, SKS), but many doubted that this will be possible in the future (LS, MR, KG, BKS). Since nowadays the establishment of protected areas requires much more involvement of local stakeholders, in most cases the designation of parks in hotspot areas probably would remain wishful thinking (LS, MR, KG, PG). The ongoing population growth and the increasing economic interests in fertile grounds and clean water will rather embitter the global fight for natural resources and thus weaken the status of protected areas in the long run (BKS). Some experts pointed to the threat, that by applying Mittermeier's hotspots concept<sup>1</sup> parks which are "poorer" in biodiversity and management efficiency might be traded off in exchange to safeguard only "biodiversity hotspots" (SA). Besides they worried about the multitude of national parks situated above the tree line or on glaciers, which would be at risk if Parks 3.0 should only

---

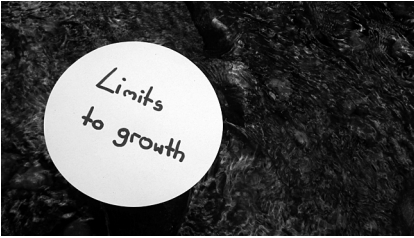
<sup>1</sup> The concept of "Biodiversity Hotspots" was developed in the 1980s by the two biologists Russell Mittermeier and Norman Myers. They tried to find out the most efficient way to conserve nature.

be located in the regions with the greatest diversity in species (LA). It was claimed to maintain all existing parks even if they host only a small variety of species (TJ).

With its Natura 2000 network, the European Union already made the first steps towards putting protected areas “*at the centres of biodiversity, in the conflict zones of competing interests*”. 21 years after the launch of the Flora and Fauna Directive, however, the challenge still remains to make this initiative a successful one. Unfortunately, most of the countries have not succeeded in establishing the ecological network as a model for the wise use of the natural resources (SE). Where new parks will be established will depend on what future generations will consider worth preserving. An honest and rigorous re-evaluation of our protected area networks would be needed (e.g. performing network analysis, identifying gaps and making all the necessary efforts to integrate these areas in the network). Although this is not a simple task, it should be on the agenda of our political leaders (IA).

Regarding biosphere reserves, in more recent years there already has been a noticeable increase of sites located in urban areas and coastal regions which are also heavily populated by human beings (ST). Some urban areas and even large cities, such as Berlin, host a great number of species, and offer an enormous potential to address a great number of townspeople who generally have a higher desire for nature than the rural population (SKS). Furthermore, protected areas in the proximity to cities could increase the environmental awareness of the urban population which might positively influence the negotiation of conflicts (RB). However, the “disneyfication” which already takes place in some urbanized parks demonstrates the absurdity of nature protection in these areas (MM-2). But maybe, in a way, all parks are “disneyfications” as they represent different images of nature, and different perceptions of how nature should be (PKC). Furthermore, in Germany and other industrialized countries probably all parks can be considered urban or peri-urban to a certain extent, maybe not in the geographical, but in their social and cultural context (MM), and with respect to their degree of nativeness. Anyway, protecting areas of environmental restoration and rehabilitation (ST) and considering the ecological connectivity between parks will be equally important for future planning processes than filling the existing gaps in the global protected areas networks (RL, PC).

### 3.2.2 Limits to growth



*H4: After decades of a steady increase of protected areas (in numbers and area), the protected area system now is entering a phase of consolidation. In Parks 3.0 the focus shifts from quantity (scale of areas) to quality.*

#### *Results of the expert discussions:*

The vast majority of the responding experts agreed that a “*shift from quantity to quality*” would be highly needed in nature conservation (PC, LS, ST, KG, SKS, BKS, WN, PP, IA, SS, BR, RB, SE, PD). However, the term “quality” needs further explanation (e.g. what are the relevant criteria, who is deciding on the quality?) otherwise it can be (mis)used in manifold ways (LA). In Eastern Europe, for example, protected areas have been declared under the political pressure in the context of joining the European Union. Back then, for instance in Romania, a “conservation boom” could be observed. The focus was mainly on quantity (achieving a minimum area in a short period of time), but not on quality (IA). In the rush to meet international, regional or other obligations, some countries may have designated inappropriate sites, in order to avoid the protection of other, more contentious sites. Thus, a focus on quality would also imply an honest and thorough review of the current protected area network in order to ensure the protection of the most valuable sites (TJ). In many parks, serious improvements will have to be made in the fields of management planning, applied research, evaluation and monitoring schemes, capacity building, environmental education, and community outreach (PC, LS, KG).

The focus on quality seems to be even more essential as nowadays many biosphere reserves or nature parks are mainly installed for economic or touristic reasons (KG). Furthermore, an improved park management will be significant in counteracting the damage done by unlimited economic growth worldwide (BR). Thereby, not only the adjoining areas and ecological corridors shall be integrated into the conservation efforts, but also the unprotected areas in between (PD, SS). Too many stakeholders still believe that biodiversity conservation or sustainable development issues shall be addressed and solved mainly through the establishment of protected areas, which is considered to be a wrong approach. Environmental issues must be

the concern of all sectors and actors of development, which is still a quite difficult principle to apply (see for example the present review of the agricultural/rural development policies of the European Union). Parks 3.0 and in particular biosphere reserves should provide concrete examples and approaches for the full implementation of this principle (PP-2). Connectivity, wilderness and self regulation will be important topics in the future (RL).

However it was questioned, if in times of huge financial shortages the quality of parks can really be improved (WN). Currently, most parks suffer from low budgets and limited human capacity, and there are hardly any signs that this might change in the future (PD). Even in Germany, one of the richer countries within the European Union, staff numbers are constantly reduced in several protected areas (SKS). Even if a focus on quality was principally embraced, not everybody agreed on consolidating the number of protected areas. According to international agreements within the framework of the Convention on Biological Diversity<sup>2</sup>, by 2020, 17 per cent of the world's land, and ten per cent of the coastal and marine areas are supposed to become a protected area of some sort. Most countries so far do not comply with this obligation. Particularly high seas, of which only one per cent of the area is protected, have a huge backlog demand (PP). The concept of Parks 3.0 shall not fall back behind these international standards (FKM, MM-2) as for insuring a high quality of protection and ecological connectivity it is necessary to guarantee a certain surface (habitats and ecological functions) as well as a certain number of protected areas (PG, MM). For biosphere reserves, in particular, the quantity in terms of area also increases due to the inclusion of larger buffer and transition zones which quite often are not legally protected (ST).

---

<sup>2</sup> The Strategic Plan for Biodiversity 2011 – 2020 and the related Aichi Biodiversity Target have been adopted in 2010 during the 10th meeting of the Conference of the Parties of the Convention on Biological Diversity. Target 11 calls for: “By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.”

### 3.2.3 Post management



*H5: The management of landscapes is becoming more and more mired in bureaucratic processes, populist action, and unresolved conflicts of goals. Parks 3.0 stand for the new approach of letting go, new extensive nature conservation. Nature develops according to its own laws, even where this is not desired by nature conservation.*

*Results of the expert discussions:*

With some limitations, most of the experts generally supported the approach of allowing more natural dynamic processes in protected areas without too much human intervention (GM, MC, PD, LS, RL, RM, WN, FKM, TJ, IA, BR, SE, PG, PP-2). So far, in Europe, nature conservation measures mainly focus on the preservation of (extensively managed) cultural landscapes and their related species (LS, RL). Unfortunately, it has become necessary to consult textbooks to know how virgin nature is supposed to be like (MC). By calling for “*extensive nature conservation*”, the environmentalist becomes the politician calling for deregulation or the philosopher defining mankind’s place in the world (MM). In the future we’ll again have to learn to leave nature alone and show the benefits of “wilderness” to those, who still tend to spend huge amounts of money to maintain certain features in the cultural landscapes of Europe (SE). Generally, it can be questioned if modern people, especially Europeans, are able not to manage nature. Long before taking the decision to leave a specific piece of land to itself and its development, a selection is made and a plan developed. Thus, freely adopted from Paul Watzlawick, one could assume that “it ca nnot *not* be managed” (PKC).

Outsiders sometimes wonder about European nature conservation approaches. African park managers, for example, who visited German biosphere reserves, have been surprised by artificial shelters for bats and amphibians. They consider it to be the natural task of the animals to look for themselves (BKS).

The current shortages in public financing might enforce less management anyway, and thus facilitate the trend of letting nature being nature (BR, PD, BKS). But this development also bears some threats. If the typical features of a cultural landscape are lost, the aesthetic ecosystem services (which are an important asset for

tourism) are lost as well (PD). In the Alps for example, it will be hard to ask for wilderness as long as visitors expect to find a certain type of landscape and species there. If the wilderness approach includes “phenomena” such as large carnivores, the call for a strict management will even raise louder (KY). New conflicts on land use will most likely emerge (BR).

At the end of the day the protected area itself might be questioned (PD). At the moment it is still not clear, how “*extensive nature conservation*” could work in reality. In Europe, there seems to be neither the space for it, nor the political will (WN), and nobody knows how to protect unmanaged wild places from encroachment (FKM). So obviously, also Parks 3.0 need professional management. This might be less bureaucratic and following innovative and more creative approaches, but certain management structures are inevitable (RB). For some, adaptive management would be the method of choice, as not only nature will change according to its own laws, but also human needs and land use forms, and these changes have to be addressed constantly (MM-2). Based on a good understanding of landscape functioning, some guided actions could be carried out in order to restore ecosystems or improve their capacity to be resilient and to deliver services that are essential to both nature and humankind (PP-2). Furthermore, some sites may require intervention, in case certain species or habitats would be highly threatened by natural succession (TJ). In a nutshell, it probably can be concluded that we need both “wild” areas and managed areas (IA). In the future, we might distinguish between “sustainably managed landscapes” and protected areas (SA).

Populist activities, however, are expected to further increase in the next society, as “nature” and its conservation meanwhile has become a pseudonym for the negotiation of a large number of varied social interests. Besides, new communication means will facilitate the mobilisation of large numbers of citizens at short notice (EH, SKS, PG, PKC). But it might be a contradiction to criticise ‘populist action’ and at the same time to promote the trendy approach of “*extensive nature conservation*”. It is quite probably that many NGOs and park authorities will always follow the latest “fashion” in nature conservation as long as this promises funding for new projects (LA).

### 3.2.4 New subjects requiring protection



*H6: The most important subjects requiring protection in the parks are species, habitats and ecosystems; also, frequently, features of landscapes or specific resources. The concept of Parks 3.0 expands to embrace the future subjects requiring protection. Today's landscapes are followed by the soundscapes (natural*

*sound environments), climatescapes (spaces of interest in terms of climate), and airscares (fresh air spaces) of tomorrow.*

#### *Results of the expert discussions:*

Many experts appreciated the idea of diversifying the range of elements which could be protected in Parks 3.0 (SE, SJ, SA, ST, LS, KG, RM, TJ). It would be desirable to literally look at “the bigger picture” and start thinking beyond the numbers of species and the size of the habitat areas (TJ). Many respondents even extended the given list of potential new subjects of protection. For example, in response to light pollution, some suggested protecting “darkness” in Parks 3.0 (MC) as already implemented in the so called “parks of dark sky” in Slovakia (SJ). These efforts correspond to the goals of the “Declaration in Defence of the Night Sky and the Right to Starlight” (KG) which was jointly signed in April 2007 in La Palma (Spain) by representatives of UNESCO, UNWTO, IAU, and other international agencies. As the service functions of protected areas for health and the well-being of people are more and more explored, in future so called “healthscapes” might be established (LS). In 2010, the “Healthy Parks Healthy People Congress”<sup>3</sup> was held in Melbourne (Australia) in order to reveal the manifold ways nature and parks contribute to our health and wellbeing. Likewise, “mindscares” or “spiritual homes” could be special places where people interact with nature, enjoy spiritual issues (SA) or just feel at home (MM). Both concepts “mindscares” and “healthscapes” underline the interrelationship between human beings and nature (ST). This approach might facilitate a deeper understanding and acceptance of the importance of protected areas in the public (IA). In addition to these “emotional”

---

<sup>3</sup> Information on the Healthy Parks Healthy People Congress 2010 (in Melbourne) can be found here: <http://www.healthyparkshealthypeoplecongress.org>



categories, additional “seascapes” were claimed by an expert in order to properly protect our marine environment (BR).

Although meeting general approval, the integration of new subjects of protection in Parks 3.0 faces some limitations. The extensive use of neologisms and new labels might confuse the public (SS) which is already bewildered by the meaning of the existing range of protected area categories. Besides, fresh air, quietness or a healthy climate must not be restricted to protected areas (RL). Ideally, by way of positive example, parks should induce a will to change the “real world” (PP-2). The whole discussion on this hypothesis reminds of Douglas Adams’ fictional work “The Hitchhiker’s Guide to the Galaxy”, in which ideal worlds can be ordered from a catalogue. If one were to consistently pursue this thought, it could also mean that the most original and most exclusive soundscapes, airscapes, etc. are only accessible to the elite and those who can afford it (PKC).

Generally, we should avoid stylizing protected areas as healthy “paradise” whereas the remaining areas without particular protection are just “hell” with respect to noise, pollution, or the loss of biodiversity (PP-2, LA). In reality, this is not true anyway. For example, the engine sounds from the popular high Alpine road leading over the Großglockner in the National Park Hohe Tauern (Austria) can be heard from any of the surrounding mountains (GM). So this remote national park is far from providing a natural sound environment. In contrast to densely populated Europe, silence can be enjoyed for instance in Canadian parks. Here you would only listen to the gentle sound of the wind rustling in the trees (KG). In the densely populated and intensely used space in Europe, even in the future protected areas will probably not be able to meet all the high expectations (KY).

Without any doubt, the parks of tomorrow will have new functions and roles to play. New concepts will probably be developed in compliance with the subjects of protection mentioned in the hypothesis, but nevertheless space is limited and controversial interests of land use are to be expected (PG). “*Soundscapes*” or “*airscapes*” for instance would probably be quite sensitive to increased visitation, so a trade-off with tourism or development goals might occur (PP). Generally it could be difficult to define the difference between a “*climatescape*” park and a park for biodiversity conservation. So it might be a better solution to integrate the mentioned aspects in already existing protected areas. It seems to be important to claim the right for a dark sky without light pollution, the right to listen to natural sounds only, and the right to enjoy the peace of internet free zones. All this stands for the absence of human civilization. Probably in the future, more and more people will highly value protected areas as retreat from the negative impacts of civilization, and

as haven to replenish their energies (PD). However following an alternative scenario, for the next society it might also be enough to coat their living room with a nicely looking wall paper with nature impressions, deceiving themselves with a lovely ‘fir forest’ scent and a ‘magical sounds of the forest’ CD (BKS, IA).

### 3.3 Social perspectives

#### 3.3.1 Sustainability



*H7: The principle of sustainability has become the guiding principle of many protected areas. Even more than today, Parks 3.0 represent an ongoing intervention in terms of sustainability.*

#### *Results of the expert discussions:*

All experts agreed that sustainability should be one of the guiding principles of protected area management (LA, SS, PC, LS, SKS, IA, TJ, RL, MR, BR, PP-2, ST, KG, FKM, MM, RB, MM-2, SE, PP, PG). In most of the parks, the potential to showcase the principles of sustainability seems to be higher than elsewhere – therefore it should be high on the agenda (LA). Protected areas should more and more become laboratories for sustainable approaches to be spread beyond their borders (SS, ST). Tourism offers in protected areas may become important means for achieving education for sustainable development: Once guests experienced alternative approaches while visiting a park, they may become “actors of change” back in their everyday life (PP-2). Generally it was assumed, that sustainability can only be achieved through a cooperative action of all stakeholders across all levels and functions (MM-2), Furthermore it shall be realised in an integrative approach and not as a sequence of single, more or less short-dated measures (PG).

Some parks already started contributing to a sustainable life style (e.g. accessibility by public transport, use of renewable energy, organic food in restaurant or cafes) but still there is a huge gap between vision and reality and it is questionable if this will change substantially in the future (LS, PD, TJ, IA). Maybe only staff in Parks 4.0 will know how to apply sustainability in practice (TJ). It seems that quite

often, people working in parks are not yet fully focussed on sustainability but on classic nature conservation (SKS). Although sustainability already has become a common principle, it is not always understood in its full sense and not all parts of the world follow the same trend. So its application into practice remains a big challenge (IA). Best practice examples have to be implemented in order to convince people of the importance of a sustainable life-style (RL, MR). The fear was expressed, that by talking about sustainability, quite often the social and economic aspects are in the front whereas nature is pushed back. Thus protected areas must not refer to the weak definition of sustainability (equal consideration of ecologic, social and economic aspects), but to the strong one, where the natural resources are considered to be the indispensable basis for social and economic development (SE, PP). Moreover, it has to be considered that sustainability in parks refers not only to local challenges, such as maintaining the welfare of the people at an ever lower environmental cost. It also implies not to externalize problems which are not solved locally to the outer world (FKM).

Not all experts have been so doubtful about the slow and insufficient application of the sustainability principle. Some believe that the number of parks implementing a sustainable lifestyle is increasing quickly. Thus the gap between vision and reality will be filled faster than we might expect (KG), although there is still a lot of work to do (RB). It appeared that sustainability is no universal remedy. In consequence of the overall efforts towards a sustainable energy supply, for instance, currently many controversial discussions on renewable energy projects in protected areas arise. Parks 3.0 could be a supportive instrument to solve these problems (KG).

### 3.3.2 Governance



*H8: In contrast to the parks of the first generation (command and control), and the parks of the second generation (target oriented), Parks 3.0 are process oriented. Consequently, they represent complex fields for experimenting with new forms of community.*

*Results of the expert discussions:*

Many experts embraced the idea that Parks 3.0 should emerge as model regions for new forms of community which are closely related to bottom-up processes and

the principles of “good governance” (MR, RB, PP, SS, BKS, TJ, IA, PC). Stakeholder involvement, “good governance” structures, and periodic consultation meetings with local residents are very positive features of any democratic society – and thus need to be actively promoted (ST). The atmosphere of governance in protected areas will be closely linked to the atmosphere of governance in the society in general. Looking at the civil unrest in some European countries, governance of Parks 3.0 might become an experiment (MM). Currently, already some so-called “people’s parks” which are driven by local communities exist. The challenge in the future will be to set people’s involvement as a fundament for a well-designed “co-management structure” without disturbance by political changes (MM-2). Developing innovative forms of communication processes will be an essential task of new protected area policies (WN). Ideally, new forms of community would result in a higher sense of social responsibility and solidarity towards the global environment (PP-2).

However, although local negotiation and participation processes are essential elements of today’s protected area management, command and control as well as clearly defined targets will never be totally obsolete (MR, RB, PG). Modern biosphere reserves, for instance, are target and process oriented because a process without (agreed) targets probably will end nowhere (PD). Generally, all parties involved still need to learn a lot in order to find the best ways of communication, participation and governance in parks. Protected area managers will have to adopt new functions as facilitators and catalysts of these participation processes, which require a new set of skills, knowledge and mindsets (SE).

So far, in process-oriented approaches, the establishment of new protected areas has often been refused by local people. If the target should be achieved anyhow (that is if the park shall be designated), huge efforts have to be made to explain the benefits of protected areas – not only for nature, but also for the society (TJ). As a lot of time and expenditures have to be invested, some experts predicted that today’s focus on extensive bottom-up processes may again decrease in the future (LS, LA). Besides, it can be questioned if in the future there will be sufficient active stakeholders who are willing to become involved and shape the development of their region (LA). Due to the current financial cuts of the protected area budgets, bringing young people to take an interest in nature conservation and sustainable development is only partially possible (SKS, IA).

### 3.3.3 Empowerment



*H9: Protected areas are often regarded as a burden by communities, many of which are already disadvantaged. Parks 3.0 can evolve into powerful instruments for the activation and support of communities that are marginalised or even discriminated.*

#### *Results of the expert discussions:*

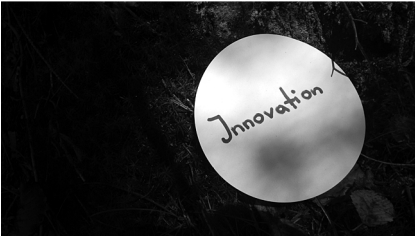
It was agreed that the advantages for communities to be – or become – part of a protected area should be made clear (e.g. economic potential, worldwide reputation, ownership feeling) (PP, PD). If parks would be ‘regarded as a burden by communities’, they probably won’t survive in the long run (LA). Since 40 years, UNESCO biosphere reserves are already trying to demonstrate that nature conservation is able to generate benefits for the communities which are implementing it (PP-2). Once protected areas are considered an opportunity rather than a constraint, for instance for testing innovative sustainable approaches, enhancing local cultural identity, and marketing region-specific products (ST), communities will be interested in being involved (PP). It would be a great achievement if at the end of the day the local people would identify themselves with the goals and the management of “their” protected area (MM). Although this seems to be a feasible scenario, it is a very difficult task that needs specialized people to make it happen. However, most of the staff members in parks so far do not know how to highlight the most obvious benefits of their protected areas for the communities. Thus, special new skills and resources are needed within the management teams (SE).

(Economic) studies show that even nowadays the establishment of protected areas may facilitate the development of marginalised communities (LS, MR). The region around Bavarian Forest National Park, for instance, is benefiting from the existence of the national park which attracts many visitors and tourists who are spending money in the region and thus provide additional sources of income and new jobs (LS). However even though these effects already exist, there would be a lot space for further improvement (MR) and Parks 3.0, with their values and way of acting, could be an important pillar of a new socioeconomic approach (SS). Unfortunately, in many national parks in Madagascar for example, the local communities are perhaps even worse off as a result of the protected areas they live next to. They

have been literally booted out of the parks, and are not even allowed to collect firewood any longer. While some are fortunate enough to achieve some sort of education and training, and become freelance guides, many others are simply left to their own means, and continue to struggle with daily life. Similar situations can be observed in Uganda, and Kenya, and to a lesser degree in Malaysia (TJ). Thus, the empowerment of local communities and indigenous peoples will probably be the greatest challenge in the future. Regular capacity building measures and the establishment of local support and good governance mechanisms shall ensure that empowerment is really implemented on a continuous basis (MM-2, KY, PG, PC). Initiatives such as the European Charter for Sustainable Tourism may help to strengthen local communities and economies (BR). However, the benefits of parks should not only be assessed in economic terms, but also in terms of resilience: those who still have land and water available will for sure be better prepared to cope with the global crisis the planet is facing (PP-2).

In any case if Parks 3.0 shall develop as powerful instruments for the empowerment of local people, a perfect zoning is needed (agreed in a participatory way at local level) which balances between conservation and development, and allows for a good cooperation between “inside” and “outside”. Thus, for biosphere reserves the term “cooperation zone” would be more appropriate in comparison to “transition zone” (KG, RB, IA).

### 3.3.4 Innovation



*H10: Protected areas have revealed new challenges and have explored, developed and implemented diverse solutions in response. The innovative benefit of protected areas lies in merging location-specific knowledge that has been handed down with international state of the art technologies and insights. Parks 3.0 will evolve into innovation regions balanced between persistence and avant-garde.*

#### *Results of the expert discussions:*

Some experts assumed that even today, protected areas can be regarded as innovative places (PC). They often are – and probably will even be more in the future – places where tradition and innovation meet (SS). There is a lot of innovation potential in rural areas and parks are used as catalysers for innovative processes, mainly in the fields of agriculture, education, and tourism (LA). In the Mediterranean, for instance, a number of marine protected areas already established underwater self-guided trails using new audio-visual technologies. On land, smart-phone technology is commonly used to provide intelligent interpretation (TJ). However, for achieving a balance *between persistence and avant-garde*, highly skilled and open minded staff is needed (KY). Besides, environmental education activities have to be initiated already at the youngest age (PG) and innovative forms of communication have to be developed (RL). One expert argued that protected areas probably do not stimulate technological innovations, but rather social ones, resulting in new organisations, processes, networks and institutions. It seems to turn out that in some peripheral regions parks are the only academic institutions that have the potential to innovate at all (LS).

In contrast, others pointed to the fact, that in rural areas, where parks are usually located, people tend to stick to traditions rather than being known for innovative approaches (LS, SKS). Generally, local knowledge and traditions can be a source for new approaches and innovative products, but they don't have to be. Quite often, traditional structures hinder innovation (MR). But on the other hand, parks could

exactly be those free spaces, in which it is possible to break with tradition and above all with conventions. They could present a way for lateral thinkers and free spirits to overcome traditional barriers (PKC). However, the given management objectives (fixed in long-term management plans) and clear governance structures (composed of advisory and decision-making boards) may prevent the emergence of innovative ideas. For testing innovative ideas you need flexibility and a creative environment which tend to be more distinct in urban and younger environments (LS, SKS). Although even if it might be true, that urban areas tend to be more innovative, innovation can also be observed in rural areas: There are (still) enough young people around, and many older people are very interested in modern approaches, such as computing, use of the internet, engagement in organic farming, healthy cooking or a mix of traditional and modern architecture (KG, IA). However it can be questioned, if the assumed innovations (e.g. organic farming or healthy cooking) are really innovative or just re-invented traditional practices (PP).

To a certain extent, protected areas have been “pushed” towards innovation by new population levels migrating to these areas. More and more people are moving to the countryside, as well as more and more people from Western Europe are moving to Eastern European countries in order to search for “innovative” lifestyles that build on the traditional ones (SE). Protected areas are often considered to be places where humans can reinvent themselves, regaining the ability to live in harmony with nature (PC). Sometimes, people who have left their hometown or even their homeland, in order to try out a completely new way of life in a protected area, have been eyed with suspicion in the beginning. But usually, in the end, it brought a positive boost for further development to the newly chosen habitat (PKC). New technologies and fast internet connections provide an opportunity for E-working, and thus for connecting isolated rural areas with the rest of the world, making them more attractive as living space also for younger people (PP-2). Thus, technology development might bring about the postulated balance between tradition and innovation (BR).

Maybe we do not need that much innovation anyway, as traditional knowledge on the sustainable use of the natural resource has stood the test of time. Its empirical value needs to be promoted both for protected and non-protected area management (ST). Besides, protection and persistence itself can be regarded very “avant-garde” (PG). But there are new challenges arising which probably cannot be solved with traditional or conservative approaches only. Climate change, for instance, will definitely be an important topic to be dealt with in Parks 3.0. Today’s delineation of protected areas might not be appropriate anymore in the future climatic situation,



for example when beech forest habitats move northwards and semi-arid ecosystems enlarge. As a consequence, Park 3.0 might have to move, too (MM-2), in order to adapt to a changing environment (BKS).

### 3.3.5 Knowledge management



*H11: Protected areas are (have become) region-locked knowledge based organisations. The structure, utilisation, application, and archiving of knowledge is gaining significance. Parks 3.0 will develop into complex knowledge landscapes straddling the living environment and excellence.*

#### *Results of the expert discussions:*

Some experts agreed that parks stimulate and support the dissemination of knowledge in their surroundings (LA, FKM). There is a lot to learn from protected areas and their interactions happening at landscapes level. They are teaching us the lessons of nature including the potentials of a harmonious coexistence. It is up to us to decode the information and use it rationally (PC). It seems to be important that Parks 3.0 develop into a real functional network which facilitates the transfer of knowledge and expertise, by exchanging staff and regularly communicating with other protected areas, rather than falling into the trap of becoming knowledge-hoarding institutions (TJ). For the Alps, such a tool already exists: Since more than 17 years, ALPARC, the Alpine Network for Protected Areas, is fostering an active knowledge exchange, and developing common strategies, joint EU projects, and numerous publications (PG).

As the long standing knowledge of locals on the landscape is very valuable (BR), more resources should be allocated to preserve traditional knowledge, which is disappearing due to globalization and socio-economic changes, and integrate it into the park management (IA). It is highly welcomed that knowledge is not the exclusive property of “science” anymore, but part of a more complex knowledge landscape, owned by manifold stakeholder groups. Such knowledge shall not only be preserved, but expressed and integrated into broader decision and management processes (PP-2). However it is not yet clear, how to handle the information in order to share it in wider regional or global contexts (ST, MR). Either managers could become “knowledge brokers” who facilitate the integration of knowledge in

the neighbouring regions (PP-2) or additional human resources outside the park administrations would have to be installed, such as for example knowledge scouts or trouble shooters (PD). Considering the current trend of economic optimisation, it remains questionable, if enough funds will be provided for such activities (KY).

Besides, park managers might have some difficulties valuing and using the knowledge they are gaining every day. Examples, where knowledge acquired in parks has been taken up and efficiently used regionally (for example to improve regional or local strategic development) are still rare (SE). Maybe there are not always enough open-minded people available for a discussion between the parks and their surrounding regions (BKS). The potential degree of such a knowledge transfer also depends on the type of protected area, its governance structure, and the political system in which it is embedded (WN). Many biosphere reserves (new generation) have already achieved these aims, whereas other parks still “lock” their knowledge, without distributing it to where it has to be (MM-2).

Finally it has to be considered that some information is secret knowledge, e.g. in the case of protected areas that contain sacred sites. In such cases, the distribution of knowledge can only be effected upon the prior and informed consent of local custodians and communities concerned (ST). Additionally, parks should not communicate nesting places of rare birds, stands of endangered orchid or other “sensitive” information (LS).

### 3.3.6 Future platform



*H12: Even more than today, the society of the future will need places for reflection, inspiration and recreation. Parks 3.0 are spaces that inspire thoughts about the future.*

#### *Results of the expert discussions:*

Many experts agreed that, from their personal experience, in an increasingly urbanized world nature is the perfect place for gaining insights and inspiration. Protected areas that provide the appropriate scenery for an overall spiritual reflection are essential for human well-being at large, and for the personal development at individual level (ST). Nature is a miracle, providing endless benefits for mankind

(PC): It is a perfect place to recover from illnesses (RL) and the best environment to develop high-flying thoughts about the future (SE, MC). Its beauty inspires art, ideas and actions of people (PC) as it invites to stay and enjoy muse or even illumination (MC). Out in nature, we constantly feel that we must not “detach” ourselves from the natural resources in order not to turn “root-less” (SE).

Thus, preserving wild areas will become an increasingly important task for protected area managers, especially in crowded continents like Europe (SE). Those wilderness areas remind us of our past and how nature and environment used to look like in former times (BKS). In an over-civilized industrialized world with the same shops and brands everywhere, and many urban areas and culturally formed landscapes, it is comforting to experience, that there are still some places which are different (MM, MC, KG). But what is meant by the term „different“? This can be illustrated by a simple example: From Innsbruck, an Austrian city, it takes only 20 minutes by car to Italy. In the same second you cross the border, suddenly there is something different. It’s Italy, you see it, you feel it, you feel well, and you get inspired. Italians will probably have the same impression when heading north towards Austria. A good park should offer such experiences, too (KG). In some cases, this seems to be already achieved. Many people (even VIPs and journalists) visiting Neusiedler See National – even if they only stayed for a very short time (LA). However it has to be kept in mind, that even if protected areas are ideal places for reflection and inspiration, this is not a USP of parks (or Parks 3.0). Sitting in the interior of an old church or in front of a tree in your (or a public) garden (WN, GM) may provide an equal experience.

As we observe today, future societies will probably be even less connected to nature. Therefore, Parks 3.0 need to address “nature interpretation” in more innovative ways (MM-2). We generally have to distinguish between recreation and reflection; with some advice and support, the former can be done by a lot of people, whereas the latter requires solitude (BR). However it was questioned by some experts if this solitude is still provided in our protected areas: A focus on events and modern visitor management attempts to steer visitors towards the “attractions” of the park. They are pointing more towards activities and “experience”, rather than peacefulness, reflection and inspiration (EH, GM). Due to prohibitions or demarketing measures, quite often the untouched wild core zones are difficult to enter, whereas the remaining zones are crowded by visitors or at least influenced by large visitor infrastructure (LS). A conflict of aims emerges: The more parks have to fulfil the development function, the less space for reflection in wild areas remains (PP).

As nowadays it is becoming increasingly difficult to experience nature alone, Parks 3.0 need to provide this space, while at the same time allowing for guided tours (TJ). Anyhow it is not sufficient for parks to provide great nature experiences and inspiration. The most relevant question is: How to make sure that this inspiration could be translated into a change of lifestyle? If protected areas will not provide concrete responses to that very challenge, inspiration could quickly turn to frustration: “There”, in the park, everything is nice, peaceful, and friendly, but “here”, in my daily environment, it is the opposite, and I do not know how to make the world a better place (PP).

### 3.3.7 Regional fractals



*H13: All around the world, protected areas pursue the same goals. Institutions are developing with similar responsibilities and cultures. Parks 3.0 are self-similar structures and can thus become the cornerstones of ecological globalisation.*

#### *Results of the expert discussions:*

This hypothesis was controversially debated by the experts. Some assumed that protected areas might act as a counterbalance to the well-known negative effects of globalisation (BR), and that they represent ecological cornerstones once they are connected to each other (RL). In case ecological globalisation would really happen, the next century might become the century of ecology – following a century of physics (20th century) and a century of biology (21st century) (PC).

In order to achieve global conservation goals it seems essential that institutions worldwide are following the same goals (IA). During the last decades, international organisations, such as IUCN, or conventions, such as the Convention on Biological Diversity (CBD), developed general guidelines for conserving nature, which resulted in comparable structures and approaches of protected areas. Thus, Parks 3.0 are probably not facilitating ecological globalisation but they are rather a result of it (LS, KG, WN). While a certain degree of harmonisation of protected area management has probably already taken place the bandwidth of interpretation of park categories as well as the governance structures still are – and shall remain – diverse. Thus, ecological streamlining shall not be an intrinsic feature for Parks 3.0

(LA). Whereas strict nature protection might be achieved by complying with universal rules, adapted approaches are needed for developing a sense of social responsibility towards nature and the environment across different cultures. Accordingly, the relevant cornerstones of ecological globalisation are not similar objectives and structures in protected area management, but rather a deep perception of sustainable development as global challenge which has to be resolved by each of us individually, on every part of the globe (PP-2). In this respect it has to be considered that even if protected areas are key players for nature protection, conservation efforts must not be restricted to parks but extended to and integrated in other economic sectors (e.g. agriculture, industry) (PG).

### 3.4 Economic perspectives

#### 3.4.1 Economics rooted in protected areas



*H14: Protected areas are becoming promoters and model regions for a green economy, which has a strong regional context and encourages entrepreneurship. As such, Parks 3.0 represent a counter concept to investment-led global economies.*

#### *Results of the expert discussions:*

The meaning of protected areas for advancing green economies is still quite debatable. One expert affirmed that by fostering local economies, hand craft, and quality products, biosphere reserves already fulfil the mentioned function (PD), whereas another one doubted that the fuss about traditional handicrafts and stage-managed countryside idylls should be the economy of the future (PKC). Generally, it was stressed, that only the buffer and transition zones of biosphere reserves may become motors for green development, in particular if use is made of organic and bio-dynamic farming, renewable energies, and ecotourism. In contrast, in core zones the primary function has to remain focused on conservation (ST, RB). In this respect, conservation and business seems to be compatible (RB). Thus, if wisely and efficiently managed, protected areas can become engines for sustainable development – especially at local and regional levels (PC, SS). An import of models

from outside, however, even if considered to be a good example for “green economy”, could be quite critical for the respective context of individual parks (SS).

Generally, the problem remains that different stakeholders still have a different understanding of green economy (PC). Therefore, the term has to be used with caution as “green economy” must not necessarily be beneficial for nature conservation (MC, IA, PP-2, BKS). It is a trendy and pretty dangerous term and it would be better to simply refer to a “future oriented economy” (WN). Anyhow, it will be crucial to determine certain criteria for this type of economy (PC). By way of example, the ecological footprint concept might be used in order to measure the degree of sustainability of particular economic activities (PP-2).

Whereas many parks already demonstrate that within a strong regional context business ideas can be developed in accordance with the nature conservation goals, it also became obvious that people in rural, lesser developed areas tend to increase their ecological footprint as soon as they earn more money. Parks 3.0 will have to find a way out of the contradiction that on the one hand the designation of the protected area might increase the standard of living of the local people which on the other hand increases their ecological footprint and thus the pressure on the environment (LA). In this respect it would be more productive if Parks 3.0 would become models of habit-change instead of being models for green economy. Without a reduction of our consumption green technologies make little sense (SA, KY, PP, KG). Thus, Parks 3.0 should at least contribute to the question of how to create wealth with a minimum consumption of natural resources (MR). In addition, environmental protection and concepts for sustainable development need to be extended beyond the current boundaries of our protected areas (BR).

Concluding it can be affirmed that protected areas are the places where a responsible use of the natural resources shall be promoted. However it has to be avoided at all costs that the “magic” of economic development outweighs the primary conservation role of parks. It seems to be dangerous to focus on pleasing developers and politicians by emphasising that protected areas will become the new models for economic development. Park 3.0 should rather be places where we experience and learn how to live well in harmony with nature (SE).

### 3.4.2 Benefits



*H15: As employers, innovation hubs, consumers and stimulators for services as well as tourism offers, protected areas can be regarded as regionally significant economic factors. Parks 3.0 systemise their regional and national economic effects and impulses.*

#### *Results of the expert discussions:*

Most of the experts agreed that the primary role of Parks 3.0 should remain first and foremost nature conservation. It should be avoided that conservation is pushed aside whereas the economic benefits of protected areas are moved into the lime-light. Not all parks can be economic motors, and most of them will never be self-financing but continue to depend on public funds (TJ). The staff of a protected area can be compared with policemen who are enforcing the law: both are providing important public services. Whereas nobody ever requires that the police should be “on market” or “generate income”, protected areas are repeatedly requested to provide benefits for local economies which has brought more negative than positive impacts (SA, PP, SS). Thus it can be questioned who or what is actually protected by a protected area: “nature” or the local regional economy in its peripheral location? The emphasis on the economic benefit seems to point to the latter (EH, SS).

Conservation is not the simple opposite of development (LA). Biosphere reserves are already trying to achieve the reconciliation between conservation and development (PD). Thereby, a balanced local development, based on nature conservation and participative approaches, shall be pursued instead of unilaterally focusing on tourism (SS). But even if many experts believe in the potential of protected areas to be catalysers for sustainable economic growth, the long term preservation of the natural values has to be given absolute priority in Parks 3.0 (PC, MM-2, IA). It is assumed that if managed efficiently, the natural resources and ecosystem services provided by protected areas are the basis for a long-term well-being of those who live in the area. If this assumption proves to be true, park managers should promote these non-use values instead of changing the emphasis from conservation to economic development (SE, IA).

Anyway, economic development can only happen in the buffer zones (MM-2). Thereby, it shall be avoided that the use of the natural resources, as well as the

consumption of energy and land is increased. Instead of being motors for economic growth, Parks 3.0 should rather be innovative counter models to the current economic development (MG, PP, MR, RB, SS). The “ecological footprint” concept seems to be a useful tool to avoid the contradiction between conservation and development. So, Parks 3.0 must not systemise their economic effects and impulses, but rather their capacity to promote sustainable development. This implies for example, that fresh water generated in a protected area is not bottled in plastic and consumed 1,000 kilometres far from its spring, or that quality tourism in parks results in millions of air travel miles caused by nature lovers (PP-2). Generally, great care has to be taken to avoid that protected areas are “loved to death” through uncontrolled and excessive mass tourism (ST).

### 3.4.3 Return of the public contract



*H16: In their vast majority, nowadays protected areas are public institutions which are publically funded. In contrast, Parks 3.0 will become fundraising agencies in the future, forced to raise money on the open market from sponsors, donors and visitors.*

#### *Results of the expert discussions:*

Many experts stressed that protected areas fulfil manifold public functions (e.g. nature protection, environmental education, health services) and thus have to be funded by the public (SS, PP, SE, WN, KY). They need to be regarded and defended as (local, regional, national or even international) commons (FKM) and thus shall remain in the public domain for the benefit of all (ST, MM-2). Public ownership and access should be reinforced, not abandoned (PP). With their primary aim of preserving nature, completely self-funded parks will probably be a utopia anyway (TJ, PP-2). It is to be expected that the maintenance of biodiversity and ecosystem services is – and will remain – an overall objective society is willing to pay for (MR).

However reality shows that even today additional fund-raising is a necessity in many parks (PP-2). It particularly takes place in countries where protected areas are neglected in terms of financing by the government (PC). But as there is less public money available all over Europe, a mix of funding sources will be generally important for Parks 3.0 (BR). We might follow the example of many national parks



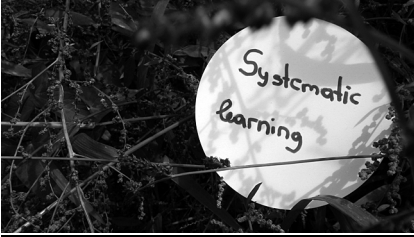
for instance in the USA or in Eastern Africa, who already raise money through entrance fees from visitors (ST). Such self-funded protected areas could free themselves from external pressure and political influence. However this kind of independency would probably only be feasible for a very limited number of parks (KG), and it might push parks into a direction that is far from their primary conservation function (SE). Besides, the political influence can also be confined, if state funding is combined with governance systems involving local stakeholder groups (SE).

Other funding options would be concepts such as the Yasuní-ITT Initiative (PP), ecosystem payments (e.g. claiming part of the profits generated by entrepreneurs in and around the park) (RL), or the cooperation with private donors. But it remains questionable if such approaches are sustainable in the long-term (MR). Potential sponsors (especially globalized enterprises) may have their own agenda in mind which may not necessarily be beneficial for nature protection. In order to avoid that Parks 3.0 become play grounds for green washing (PD, KY), private sponsoring needs to be critically questioned and always related to the particular philosophy and commitment of the company. Generally, it would be necessary to keep a certain room for negotiation which allows for searching appropriate funding opportunities that help achieving the vision of the respective park, and not the opposite way around (PP-2). However, once protected areas would start courting private donors for basic funding, a new rivalry with environmental NGOs is to be expected (LA). Anyway, the recent economic crisis in Europe demonstrates the limitation of funding by the private sector, resulting in a stronger need for a reliable public support (BR).

Due to all these reasons, some claim that the privatization of parks shall be avoided as far as possible (ST, SKS). Others consider an equilibrated mix of public and private financing "healthier" for the management of our protected area systems. In this case, the public money would bring stability and cover all basic management needs, while private money could complete the budget for additional activities such as second and third priority activities from the management plan (PC). There are already good examples existing where parks are partly financed by public and private investors (RB, BKS). For any fund-raising activity, the services provided by protected areas should be promoted (IA) which requires a good information and cooperation policy (RB). For acquiring public funding it has to be communicated that every Euro spent for a protected area is a fruitful investment in the local / regional economy (LA).

## 3.5 Management perspectives

### 3.5.1 Systematic learning



*H17: A long distance flight requires highly qualified, specialised staff, ranging from the aviation maintenance technician to the pilot. Accordingly, in Parks 3.0., the era of the self-taught individual will be over. Everyone involved, from the director to the ranger, will be a qualified knowledge worker.*

#### *Results of the expert discussions:*

All experts principally agreed that highly qualified staff is an important precondition for efficiently managed parks (PC, KG, TJ, RB, PD, IA, WN, MM-2). One expert, however, pointed to potential problematic side effects, such as overqualified staff which causes high costs, or the recruitment of qualified experts from outside the protected area who might not be accepted by locals in the region (LA).

Managing a protected area is a complex task, so constant learning is essential (SE). Park managers need to be multi-tasking, and open to adapt to new challenges and new technologies (BR). They shall develop a common sense of how to promote conservation and sustainable use (MM-2). Many of the conservationists are classically trained in natural sciences, but in their daily work they predominantly have to deal with people. Thus, knowledge in psychology, human behaviour, and ethnic issues is quite important (PD). Furthermore, developing a model region for sustainability requires many different experts with the capacity of involving and motivating stakeholders, building consensus, and delivering services in and outside the protected area. Consequently, the terminology has to change. Instead of classical park managers or rangers, we rather need facilitators, knowledge brokers or animators (PP-2). Local knowledge and experts living in and around the park can additionally contribute to the management of the protected area (RB). Even self-taught individuals, organised in social networks, might help to achieve the conservation objectives (RL).

Some argued that the majority of park managers are already highly qualified knowledge workers (KY, SS, WN), particularly in national parks and in some of the biosphere reserves (WN). While one argued that qualification only develops through own experiences and the daily work in the parks (PP), another one claimed

that park managers should not be left on their own (SE). There is a need for particular trainings, and an exchange of experiences and best practice (SS). Appropriate capacity building programmes should prepare the staff for the long and tough battle related to biodiversity conservation (PC). However, so far only few models of comprehensive capacity building programmes exist (SE). Besides, acquiring specialised knowledge and developing skills for protected area management (like for example in the Klagenfurt MPA Programme, cp. chapter 0) is often very costly and time demanding, but worth the effort (PC). Knowledge is power (MM), and if we want to preserve our nature we need to have the right people at the right place (IA).

### 3.5.2 Extreme planning



*H18: The planning involved in protected areas belongs to the spatially large-scale endeavours of modern society. Complex processes draw together the framework conditions relating to landscape, technology, society, and economy. Planning and implementation are tightly interwoven.*

#### *Results of the expert discussions:*

The majority of the experts agreed that the planning involved in the development of protected areas is a quite complex task (PC, BKS, MR, MM-2, PP-2). Particular structures and processes are needed in order to support managers in dealing with this complexity (MR). Common planning processes will have to change if the management of parks shall be based on ecosystem services in the future (BR).

Generally, during the planning, the basic needs and requirements of various actors and sectors have to be satisfied and included without violating legislation and harming other important principles. It seems that the most valuable results of planning process are the intensive discussions, the search for compromises, and the commitments agreed between the involved stakeholder groups (PD). If planning is not done carefully in the pre-phase, severe consequences might pop-up in the implementation phase (PC). Taken as a whole, it is essential, that management plans of protected areas are recognized and accepted by the stakeholders in the entire region, and incorporated in wider strategic and sectoral plans (SE). As the planning

and implementation of protected areas is a continuous process (PP-2), appropriate adjustments have to be made whenever necessary (BKS).

Although planning is highly needed, due to changing natural, political, or socio-economical conditions the development of parks is sometimes unpredictable (PP). Consequently, planned actions are often not implemented: Either the required resources are not in place and there is not enough staff, or some short term interests interfere. Thus agreeing on visions, guiding principles, or philosophy seems to be more effective than defining concrete action plans to be implemented in certain time periods (PD).

The term “extreme planning” was not clearly understood by some experts (BR, MM-2). It seems to be too complex and too scientific to be comprehensible. Parks 3.0 should ensure a holistic planning approach from people for nature. The planning should be initiated by the parks themselves (SA, LA), and led by people in and around the protected areas. Additional experts are required to assure that facts and expert knowledge form the basis for decision-making (MM-2). Besides, other sectors and institutions dealing with the surroundings have to be involved in order to avoid the development of parallel worlds without any chance for integration (LA).

### 3.5.3 New spatial patterns



*H19: Protected areas produce effects, many of which take place beyond the borders of the protected area. The sharply defined boundaries between inside and outside begin to blur. This development is set to continue. Parks 3.0 will evolve into pulsating cores with a radiating sphere of influence.*

#### *Results of the expert discussions:*

Some experts agreed to the hypothesis (SS, RB, SE), but even more argued that this scenario is already in place, in particular in UNESCO biosphere reserves (PD, SKS, SA, LA). Here, the boundaries of the three zones (core, buffer and transition zones) are indeed clearly defined in spatial terms, but an extension of the transition zone(s) is noted in many biosphere reserves in recent years, who start reaching out beyond their defined boundaries (ST). The transition zone is by far the most valuable zone in a biosphere reserve as the experiences of an assumed model region for sustainability are relevant for the surrounding societies, and thus attract a lot of

interest from outside (PP-2). Accordingly, the transition zone of biosphere reserves should better be called “cooperation zone” (KG, IA). However, these “positive influence areas” should not only be seen in terms of geographical neighbourhood. It has to be assured that this sphere of influence reaches policy-making (PP-2). Only if this is achieved, protected areas will play a role as driving forces to induce change. In the Alps, they already act as promoters to improve ecological connectivity. Gone are the days, where park managers only acted within their own boundaries. Nowadays, they are obliged to establish a close cooperation with their surroundings and with other protected areas (KY).

One expert, however, argued, that it might be the other way round: Instead of positively influencing the neighbouring regions, protected areas will be increasingly intruded from outside and will barely be able to secure their grounds (BKS). Consequently, there is a need for larger patches of strictly protected areas: The bigger the core areas are, the greater are the chances of safeguarding the most representative elements of biodiversity (at least if the core areas have been established in the right places) (PC). In turn, neighbouring regions will benefit from the ecosystem services provided by the protected area (PP).

### 3.5.4 Speed breakers



*H20: Processes of evolution and geological developments occur at a different speed than social trends or economic and technological processes. The management of Parks 3.0 will be able to bridge these differences.*

*Results of the expert discussions:*

None of the experts agreed to this hypothesis. On the one hand, scientists still do not fully understand the ecosystem functions (MM-2), and phenomena like the accelerating rate of climate change will impact on both nature and society (BR). On the other hand, Parks 3.0 will neither be able to slow down the social and economic developments, nor will they accelerate the natural processes such as the evolutionary forces (PC). Furthermore, people will always be influenced by the actual trends in society which automatically impacts on the management of protected areas (PG, KY).

Even nowadays it can be observed that social trends outweigh the reflection on evolutionary processes: From a historical point of view, the landscape and its species composition changed dramatically over time. But many nature conservation efforts focus mainly on the conditions around the year 1900 as reference status for our conservation objectives (LS, SE, IA). Until now, almost no discussions have been held on the difficulty of the (subjectively chosen) reference conditions. Due to the lack of communication some of the regulative measures of nature conservation in protected areas remain “suspect” for other people. Consequently, in Parks 3.0 there should be a shift towards natural processes and self regulation (RL). Nature should be allowed to exist without too much intervention (unless this is required in specific situations), instead of just conserving the status quo (TJ). But it remains unclear who will be the one to determine these “specific situations” (PKC)?

If parks are allowed to evolve naturally, they will be able to fulfil their important function of monitoring changes in nature, even if some of them happen so slow, that we even “forget” about them. We are still far from having well developed long-term monitoring programmes, jointly set up by networks of protected areas (SE). Other changes might be too fast to properly assess their possible effects, and to enhance our capacity to adapt. This again emphasises the need for “resilient territories” (PP-2).

Generally, the question remains how to bridge conservation goals with economic and technological processes in the core and buffer zones. This might even give way to the installation of wind turbines, and solar energy plants in the strictly protected areas (PD). Parks 3.0 may better stand for reducing the speed of nature experience than for bridging the mentioned differences in speed. Protected areas are the right places to find out the differences between nature on the TV-screen and in reality, but many visitors are still not ready to spend more time in a park than for watching a documentary. So Parks 3.0 might turn the quick nature consumption into a real nature experience (LA).

### 3.5.5 Synthesis categories



*H21: Currently, the IUCN categories successfully sort the protected areas of the 20<sup>th</sup> century. In the 21<sup>st</sup> century, a new system of categories will be established which is guided less by management objectives and more by management principles.*

#### *Results of the expert discussions:*

Whereas some experts did not see the difference between management “objectives” and management “principles” (LS, PD, MR, BKS) another one agreed to focus on management principles instead of objectives. In most situations, the basic principle should be the allowance of natural processes, based on the adage “if it isn’t broken, don’t fix it”. Management objectives are only required in some cases, where particular species or habitats need intervention to ensure that determined conservation goals are met (TJ).

The majority of the respondents controversially discussed the potential need of a new system of protected area categories. While one assured that the current system provides effective principles (SA), another one argued, that it would require in-depth assessments (including comprehensive biodiversity monitoring programmes), and thus will take a while until we would be able to judge whether the present protected area categorisation system is efficient or not (PC). As many of the decision-makers and even park managers in some parts of the world just recently started to understand the IUCN categories and their benefit for the management, no more energy should be invested in developing a different categorisation system. Instead, improving the effectiveness of the park management should be emphasised (SE). In this respect, the IUCN “green list” of well-managed protected areas, an initiative started by WCPA, might be a constructive approach (SJ).

It was discussed if a single categorisation system, comprising and unifying all existent protected area categories, is at all needed or not. Some hope for a revision of the existing approaches in order to include the current categories of IUCN, UNESCO, BirdLife International, or Conservation International into one system (BKS, IA). Others are pleased with the existing variety of categories as they represent different approaches, which still have some common points and overlapping areas (PP).

As long as the category systems and their zoning models do not make a difference between the high mountain areas and lowland wetlands, this discussion remains rather academic anyway (LA). Besides, by investing a lot of time on the definition of category systems and related rules, we might lose track of the real challenges we have to solve, namely the question of how to achieve a sustainable use of the natural resources. Even a well defined and strictly managed protected area does not make much sense in the middle of a completely unsustainable society. Thus, focusing on the possible positive impact of parks on our society is far more urgent and essential than exhaustingly discussing the right classification system. Less perfectly defined parks (representing about ten percent of our land) are acceptable if only they contribute to the transformation of agricultural practices (which impact about 80 percent of our European landscapes) in the direction of sustainability (PP-2).

### 3.5.6 System research



*H22: The creation of inventories of hoverflies and flatworms is coming to an end. Parks 3.0 are research and observation platforms that allow the exploration of spatial, temporal, and functional relationships and interactions of natural systems.*

#### *Results of the expert discussions:*

Most experts agreed that inventoring of species must be continued (ST, PC, MC, SA, TJ, KG, SE, RB, SS, MM-2, KY, IA). It is a precondition for the long-term ecological monitoring (related to the abundance, distribution and dynamics of species populations), and an overall indicator for the status of ecosystems, for example in the context of climate change (ST, RB). Exploring the relationships and interactions is important, but it cannot be done properly unless the building blocks are known (SE, KG, RB). One expert however encountered, that it will probably not be a disadvantage to any species if they remain undiscovered by mankind (PKC).

Species inventories and monitoring provide the basic information for conservation programmes and management decisions (PC, SS), but so far all the inventories are incomplete (KG, RB). At present, for only about 2.5 percent of the species at the globe the basic requirements for survival are known (SA). Gaps in the protected



area coverage also exist due to a lack of data, so basic research (together with monitoring) should stay high on the agenda (SA, TJ). Currently, there isn't a single park in existence, where an inventory in terms of biodiversity is even close to completion (MC, TJ, KG, RB).

Consequently, the flatworms – and their related experts – shall not be disparaged, and nature research shall not be left to amateurs (MC, TJ, KG, RB). Although taxonomy shall still be given a priority in protected and non-protected areas, the ecology and interaction of species is an increasingly important research topic (MM-2). Very often, particularly the “hoverflies and flatworms” provide an early-detection system for identifying problems (TJ). Currently, non-invasive, remote sensing techniques, like photo trapping, are substituting the classical research approaches. More and more data is collected about biodiversity, but often the various links and laws that are governing in nature are not fully understood (PC). Even worse is the fact, that the monitoring results are often not included in the management decisions (PC, SA).

Biodiversity, however, not only comprises the species diversity but also the diversity of ecosystems and genes. Even in well-studied areas such as the Alps the diversity of species is not entirely known – not to speak about the genetic diversity which should also be protected according to the Convention of Biological Diversity. Parks 3.0 might play an important role in this respect (KY).

Although the overwhelming majority agreed that species inventories have to be completed, and will be relevant in the future, some respondents argued that greater attention should be paid to socio-ecological research, as well as to processes and relations between the human and the natural dimensions (IA, RB). So in Parks 3.0 research might not be dedicated to “natural systems” anymore, but to “territorial systems”, defined as a system of interactions between physical (natural) and socio-cultural (human) sub-systems. It will be challenging to organise the interaction between these sub-systems (between “Man and the Biosphere”) in a sustainable way (PP-2).

Concluding it was argued that even Parks 3.0 will neither be able to bridge the gaps in science and public administrations nor will they achieve abolishing the sectoral thinking. But they can require that each of these stakeholders and actors can play his or her role where appropriate and thus contribute to the functioning of a protected area (PD).

### 3.5.7 Fully interactive



*H23: Today's high-tech visitors' centres are a thing of the past. Members of the new visitor support staff are fully interactive; they are very knowledgeable and possess a sense of humour. In Parks 3.0, people will show people nature.*

*Results of the expert discussions:*

The hypothesis was not agreed on. It was argued that it would be marvellous if skilled people would show visitors around. But people cost money, and due to financial shortfalls, these costs will be the limiting factor (KY). Even nowadays the employees of visitor centres are increasingly replaced by smart gadgets, offering basic information with few (screen) touches. Human-to-human interactions are less and less encouraged. Resulting from our technology-dependent society, many children do not know which animal is providing the milk for the daily coffee (PC).

Additionally, it was predicted that in future protected areas, not only the high-tech visitor centres might be outdated but also the huge offer of guided tours. In Parks 3.0, people might go out in nature and enjoy wilderness experiences themselves without interpretation and instructions (LS). This scenario was highly welcomed by some experts (PP, RL, PD, MM, KG, RM, KY) as for them there seems to be nothing better than being fully off-line (PD) and listening to wolf's howling somewhere out in wilderness (PP). Besides, it was expected that people visiting protected areas in the future will probably be those who really want to flee from technology (MM). Thus, Parks 3.0 could also stand for a different relationship of humans to nature: Nature might not be seen as an object anymore which has to be shown to and interpreted for people. Instead humans perceive themselves as being part of nature and thus are able to experience it for themselves (RM). Although even if this vision might be seductive, the current trend doesn't indicate this way. Probably there will be more high tech centres in the future (KY) which is good, as they are needed to fulfil the educational and socio-economic function of protected areas (IA). Without interpretation, many park visitors would not be able to know more about the site than what they see on the digital maps on their smart-phones (LA). Particularly for schools and young people, visitor guidance seems not only to be necessary, but an essential enrichment (RB).

Concluding it was claimed that Parks 3.0 have to fulfil different functions: They need to allow people to experience nature by themselves, and find space for inspiration and reflection, but they also need to provide guided tours for those who are interested in them. People with limited abilities, for instance, depend on guided tours and visitor centres if they want to experience nature (TJ). Parks 3.0 might develop into two different directions: Some of them will be wilderness areas where people can relax, contemplate and feel nature as it is without great disturbance from park staff or guides who want to tell them what it is all about. Others, particularly the parks close to urban conglomerations, will offer a lot of sophisticated technologies (e.g. ISmart's) in order to entertain all different kinds of people in nature (MM-2, KG).

## 4 VIEWPOINTS OF GUEST COMMENTATORS

In addition to the international experts, commenting on the hypotheses, some guest commentators have been invited to briefly sketch their personal view on the future roles and outline of protected areas. Four of them took an effort to share their thoughts with us.

### 4.1 We have failed so far

*By Roger Croft (IUCN WCPA Emeritus)*

I warmly welcome the debate stimulated by Michael Jungmeier as we prepare for the next IUCN World Parks Congress in 2014. This debate is at the centre of teaching and learning at the University of Klagenfurt as part of its outstanding MSc in Protected Areas Management. My commentary is based on reflecting over many years on our successes, but especially on our failures, as we are not sufficiently prepared to learn from our mistakes: surely the ultimate, if somewhat humiliating, exercise!

#### We have failed so far!

We are too complacent to accept that 10 per cent of the land area and less than one per cent of the sea area protected is a success – a point we celebrated at the 2003 World Parks Congress. This is not success but big failure: what about the remaining 90 per cent and more than 99 per cent respectively? Worse, not all protected areas exist in reality; they are so called ‘paper parks’. Worse still, not all will measure up to the IUCN definition of a protected area, or to its management effectiveness evaluation system. They are subject to political manipulation and reductions in resource allocation, and they are the targets of mining companies, agriculturalists and foresters globally and locally. At least in Europe, the EU has shown the way with the Natura 2000 system which has resulted in better protection of many areas and some additional areas.

Even in the protected areas community there is an insufficient agreement on the great variety of protected area types. For instance, are the cultural landscapes of Europe really protected areas? Yes, say Europeans who understand the subtle interplay between society and nature over many centuries and millennia, and the values these represent for our modern society. No, say biodiversity specialists from North America as protected areas must be pristine nature. A healthy, but not necessarily productive, debate has ensued.

#### So what shall we do?

Let's warmly welcome Michael's Parks 3.0, but think even beyond that to Parks 4.0! Parks 4.0 are not restricted to protected areas as we do not want to persist with "islands of protection in a sea of devastation". Parks 4.0 therefore cover all of the land and the sea as it is all important in its own right: nature for nature's sake, and for our human survival for this and following centuries. My vision is for a nature based stewardship of our natural resources and natural systems, to use them sustainably, to understand their limits and carrying capacities, and to leave a worthy inheritance for the future. This means: making sure that protected areas really work to protect and preserve nature's systems and processes, that they are properly buffered against cross boundary activities, and most significantly that all of the land and sea areas are cared for at a higher level of stewardship than at present.

#### What's needed to achieve Parks 4.0?

First and foremost, there has to be a political will, coming directly from politicians internationally, regionally and nationally as a result of pressure from civic society and lobbyists of the need for a new mandate. Recognition of protected areas has to go beyond the CBD, where some key nations are absent. They need to be at the heart of the new "Millennium Plus Development Goals": it's obvious in terms of soil productivity, breeding and spawning areas, water catchment management etc.

Second, societal involvement is essential as people will determine future agendas by the way they influence politicians and by their own attitudes and behaviours. This means improving understanding of the importance of all of the land and sea, and the part which protected areas play for our increasingly urban society. Engagement of younger generations is a key component of this second element. The iACT Dialogues being developed under the IUCN Youth Programme, with involvement inter alia of the Sibthorp Trust, is a case in point to articulate new futures from a younger perspective and expose them to older generations in the hope

and expectation of changing the latter's mindset. The outcomes will be reported to the 2014 WPC.

Third, the global corporates need to be re-aligned to recognise the positive role which they can play in sustaining a business environment without over exploitation of nature. The continuation of the various forums under the umbrella of the World Business Council for Sustainable Development, the dialogues with the International Council for Mining and Minerals, need to become positive action for the environment, including protected areas, rather than posturing from rigid positions. Surprisingly, companies like Rio Tinto, have been prepared to move forward in their own operations and others need to follow.

Fourth, we need some scientific pragmatism. We know a lot about natural processes and the interactions with humans. But we do not make it available in an understandable or accessible form to managers in protected areas and beyond their boundaries. This should be priority of the academic and consultancy professions. The WCPA Best Practice Guidelines are helpful, but we need more scientists to translate their ideas, knowledge and understanding to everyday use. The E-book on protected areas management being developed in time for the WPC by WCPA experts is a good exemplar for others to follow.

Fifth, we need greater common sense in conservation. The conservation movement has moved on, but there are still those who wish to turn the clock back to some idyllic past-time. Recognition that this is not achievable because of natural changes and changes in human activities and behaviour is essential. It is not selling the birthright, but recognising that the 'no never' philosophy has rarely won the argument against commercial aspirations and demands.

Sixth, we need to harness global tourism so that it does not become even more of a threat to protected areas, especially World Heritage Sites, as part of a "must go to" collector mentality. Deals with tourism companies and their representative bodies to adopt stringent nature centric policies and practices are needed.

Seventh, we need to move from a consumptive society to one which will live sustainably within the carrying capacity of the Earth's resources. Previous arguments on the finite level of Earth's resources from the 1960s onwards have always left a legacy of 'it will not happen' and, as a result, they have not been as influential as had been hoped. This does not mean 'sack cloth and ashes' living but one where everyone citizen is mindful of the use of 'waste' through philosophies such as 'reuse, recycle and reduce'. Civic and political leaders at all levels have key roles to play in getting these messages over.

And finally, eighth, we need to develop and implement new ways of spatial planning. Too often the boundaries of protected areas are a line on the map and on the ground, easily seen on satellite imagery: the classic examples of protection hard next to devastation. Spatial planning at national and inter-country transboundary levels should recognise the natural flows of water, energy etc across boundaries and the positive, as well as negative, ways of managing these through application of management zones, buffers and corridors.

For those readers who feel that this eight point agenda is far-fetched, at least I hope it will stimulate debate and result in new thinking stimulated by Michael Jungmeier's Parks 3.0 challenge. For those who think that this agenda has nothing to do with protected areas, I ask them to look beyond the core areas and ask why we have so few protected areas and why there are continuing demands for the exploitation of their resources.

## **4.2 We need more innovation!**

*By Mario F. Broggi (private scholar)*

The submitted hypotheses are refreshing; the ideas require further development in relation to major conservation areas. I believe that we should not be contemplating a softening of the conservation status, but rather its further development in content, without inflationary appellations of category. My comments are organized in a somewhat unstructured manner, reminiscent of a quarry. The background to these thoughts is provided by the knowledge and understanding of numerous major Alpine conservation areas, my earlier work in the spheres of nature conservation and land use, as well as my current participation in the establishment of the Locarnese National Park in the Swiss Southern Alps.

1. It appears that – for all too long and in a manner that has been too one-sided – those of us working in nature conservation have been concerned with the conservation of rare species, and thus, have unintentionally allowed the segregation into protected areas and unprotected “waste areas”. Both are necessary: the separation of priority zones for biodiversity as well as an adequate quality of life across the entire area. Working meticulously, we have created inventories for many species and habitats, which are only partially supported by acceptance, drawing the scorn of an ETH professor in Switzerland, who exclaimed: “Stand still, Helvetian, here lies an inventory!” While nature continuously reshapes the landscape, we hu-

mans pursue the aim to achieve landscape stability. Consequently, nature conservation areas are designated, where a certain status quo is preserved. These areas were protected against modernisation efforts, not always considering that a recipe for handling change in nature was necessary, in order to preserve the condition of these areas worthy of conservation. There was little discussion about which nature actually needs to be protected. To date, we have very few answers about the why and how of species' survival. Because we do not know how many and which kinds of biodiversity are really needed, and which kind of biodiversity protection needs to be arranged, we have to learn to "manage the unknown". I have personally encountered this uncertainty in the context of a study where we wanted to identify the national priorities of ecological compensation in the agricultural lowlands of Switzerland and discovered that two thirds of all occurrences of nationally threatened species do, in fact, occur outside of the habitats that we had recorded in the numerous federal inventories. What is more, it would be nice if the moral pressure towards more ecology could be enhanced with aesthetic feelings of pleasure. Putting the emphasis on that which is beautiful is surely worth further examination.

2. Our regionally diverse cultural landscapes are of great inherent value. They reflect the long history of human land use in Europe. Much would be lost, if we allowed the entire Alpine region to "return to wilderness". The cultural landscape itself carries a value that is not yet receiving adequate attention from the market of competing interests. We are going to have to conceive of significantly more innovations, for example in order to give small-scale "high nature value agriculture" a chance with its biodiversity hotspots. But we are also lacking the necessary stimulants for a more extensive "low energy agriculture", with areas kept open to prevent the spread of woodland and with meat production (here we mean the use of robust grazing animals that are kept throughout the year in low density herds).
3. On the other hand, areas that are growing wild are seen as a viable alternative due to economic considerations with real cost-benefit analyses. It would be necessary to dispense with many new developments or with expensive redevelopments. The potential for free dynamics can be established relatively quickly with the determination of areas that have remained more or less undisturbed so far. Marking these for free develop-



ment would represent a significant contribution to European nature conservation. I would make the conscious decision to allow the randomness of nature, simply because we often do not know what is right. As the American poet and farmer Wendell Berry (Worldwatch Report 1992) said: „We cannot know what to do, as long as we do not know, what we would do, if we did nothing“. Allowing wilderness is consequently also a form of reinsurance in nature conservation. However, allowing wilderness also requires broad mental acceptance by society. This rethinking does not yet have majority appeal and in terms of spatial planning we are only aligned for growth, not for shrinkage. Here too, we are lacking the necessary innovation to turn the “weakness” of retreat into a “strength”. This could, for example, take the shape of a compensation for public services. It appears that the CO<sub>2</sub>-binding forest is crucial for reaching climate goals. Why, therefore, don’t we compensate this reduction effect as a service for climate protection, rather than redeeming it through trading indulgences somewhere in the Third World?

4. Finally, I submit a plea in favour of not holding on tight to images that no longer depict reality, but rather reflect distorted notions of what form sustainability should take in the context of land use. The cementing of structures is not sustainable. Too often, the countryside is “staged” and harmony is faked. It is not necessary to maintain cultivation efforts right into the furthest corner. In the long term, it is also not affordable. Nature will seek a path of variation and of the unforeseen. We must allow this, and thus, we must increasingly anticipate what has, so far, been unthinkable. In other words, in Central Europe, we must accept the coexistence of nature and history. It is therefore pointless to play off the traditional cultural landscape against the wilderness. Areas growing wild are also part of the cultural landscape and vanishing cultural landscapes still retain the “Machu Picchu effect”, which can be very attractive for nature tourism. From a Central European perspective, ideas such as these are not adequately reflected in the IUCN categories, and should be appropriately developed.

### **4.3 A continuous process**

*By Engelbert Ruoss (Senior Advisor and Lecturer)*

The new generation of protected areas, Parks 3.0, started already to exist worldwide. It is a matter of continuous process that a lot of parks have adopted the new philosophy. The most visible shift can be seen in the biosphere reserve concept which moved from the first to the 3<sup>rd</sup> generation within 40 years, the third generation conceptualized mainly in the Seville Strategy 1995 and the Madrid Action Plan 2008.

The dramatic development of the world economy as well as the global change issues (climate change, social transformation) will be the major challenges the protected areas will face in the future. The hypothesis defined regarding Parks 3.0 are therefore already reality and, whether desired or not, they are the baseline of the future parks.

The future scenario I see rather pragmatic and consider the situation of most parks as dramatic in terms of endangering natural and cultural heritage, governance, management, funding, and participation. A majority of parks will remain first and second generation parks or badly managed third generation parks. A minority of parks will successfully implement the sustainability concepts, protect the local natural and cultural resources and create the wealth for local people and business; hence balance the protection of natural and cultural heritage and local development.

The successful future parks will represent a new “regional” business and management model, as a Private Public Partnership (PPP) and managed by a “Professional Service Centre (PSC)” which is acting as a territorial professional hub. Public and private bodies are share and stakeholders of nature, human and financial capital of the area and the PSC acting upon a charter and a long term contract established among the partners. They will be managed according Outcome-Oriented Public Management (OPM) principles (see Schedler and Proeller 2010), as the “New Public Management” concept. The new territorial business model is a corporate model organized three dimensional as bottom-up, top-down and side-in processes. This could be a truly corporate responsibility approach for the implementation of sustainability in parks areas. Besides the above mentioned hypotheses I would add the following: leadership as key factor for the success and mid to long

term strategies and action plans are “musts”. To be a park will be an asset in future, but local people and authorities have to catch the moving train.

#### **4.4 Sustainability, good governance and benefit sharing**

*By Marta Mugica (EUROPARC Spain)*

Congratulations on opening this debate, particularly considering the current social, institutional and environmental changes. From the lessons learned along several decades of protected areas in Europe, it is the right moment to think about the desired future, enhancing the positive results, and adapting and creating new ways to achieve the same old aim: nature conservation in harmony with human needs.

I consider the concept of “Parks 3.0” very intuitive and inspirational. Since centuries, mankind and nature have been closely linked to each other in most of our countries. Thus, the three principles suggested are crucial: sustainability, good governance and benefit sharing. It is true that these general principles can be more or less relevant depending on the type of protected areas, but without these elements nature conservation policies will never be relevant for society.

Especially in times of economic crisis, it is crucial to prioritize the use of scarce resources. It is not always obvious that high budgets guarantee high quality management. Many conservation projects need less budget than some big infrastructure projects (sophisticated visitors centres, for instance, expensive to build and expensive to keep). A less bureaucratic approach is needed, though efficient management structures are needed, working in a more collaborative and creative way, based on professional-multidisciplinary management.

Quality versus quantity? In many countries the evolution of nature conservation history has led to a relevant percentage of protected areas (terrestrial, different situation in the seas), so to keep the “prestige” of the role of protected areas as tools for nature conservation more efforts are needed in terms of monitoring and evaluation of success. For instance, EUROPARC Spain is promoting the use of a “Standard for conservation projects”, a manual elaborated together with managers as a tool to check the main quality criteria every nature conservation action should fulfil. It is time for quality.

The question of percentage: different approaches “Nature needs 50%” versus integration in the landscape matrix (i.e. “biodiversity conservation or sustainable development solved mainly though the establishment of protected areas, a wrong approach”). Though more challenging, I fully agree with the second approach.

Landscapes cannot be “black or white”, they have all colours of the rainbow. This comment links to the discussion of “wild areas”. There are some “wild areas” in Europe, and they are relevant “in quality” to contribute to biodiversity and nature conservation processes. But the highest percentage of “natural lands” in Europe is the result of centuries of human intervention. The challenge is how to avoid the destruction of those landscapes (protection against artificialization pressures let’s say), and how to keep their values in terms of ecosystem services. This portion of landscape is much bigger than the current and probably the future “wild areas”.

If we accept protected areas are key tools to provide ecosystem services and well-being, it is clear that beyond the fundamental role of protecting species, habitats, ecosystems and landscapes, other functions such as education, research, health and spiritual experiences are important. Connecting nature and people is easier if we, as professionals and managers of protected areas, use other arguments better understood by general people. Codes of habitats and catalogues of species make sense for some individuals because of their professional or personal interest, but “hard data” don’t move the hearts of more generalized public or enterprises. We need to touch the heart, to convince people they need protected areas as a guarantee for their well-being.

Governance is a very difficult task. Good governance is very much about participatory culture, and it is true it is time and resource consuming. It is also about short or long term perspective. Particularly when short budgets are available, other ways of doing things are welcomed. As part of a democratic society, protected areas policy should be more open to other ways of collaborative work. Many sectors of society are willing to contribute with their time, knowledge, expertise and energy: young people looking for professional experience, retired people who are still very active and are willing to share their experience, local enterprises, communities, NGOs working with privates (land stewardship model), etcetera. Working in a collaborative way requires particular skills, requires a well defined “role play framework”, and of course an honest will from the authorities. Nobody says it is easy, but it is worthwhile. Crisis situations bring some opportunities. Let’s use them not only as a reaction to a bad situation but as a more democratic and sustainable way of working.

In any case, this new model of governance cannot be interpreted as a lack of support from public administrations and public budgets. On the contrary, nature conservation should be part of the priorities of the Agenda for any government. Healthy environment is the basis for any healthy society. Protected areas are essential tools for a modern society that recognised high tech cannot give responses to all

our needs as society. Protected areas can help to promote economy in rural areas: promotion of local products with labels related to healthy products, etc, can help. These initiatives can help “green economy”, but they will not solve all the problems, therefore public budgets will probably always be needed. And private or semi-public companies dealing with natural resources (water, energy) should also be involved. Again, ecosystem services provided by protected areas to society should be clearly connected.

How to apply the best knowledge to management decision is also a crucial question. The transfer of knowledge through exchanging staff and communication should be promoted in every region. Best practice platforms to transfer scientific knowledge into management decision are also needed. Not all scientific knowledge is easy to integrate into the decision making process. Researchers and managers use different languages and work at different time scales, and priorities are frequently different. However, managers need the best scientific knowledge to make the best decisions. Therefore, a bridge between these two worlds is always needed. Professionals specialized in “translating” scientific information into practical management tools are needed in Parks 3.0.

And this is part of the new aspects to be developed in a process of capacity building. Skills related to social and communication process have to be improved. New generations of managers need them.

Global change, particularly its causes linked to the model occupation of territory, natural resource consumption and demands of society, requires strengthening the role of protected areas to human welfare.

The new scenario requires managing protected areas as places not only for the conservation of species or unique ecosystems, but as providers of essential services for the welfare of both the local population and other beneficiaries.

The challenge is to demonstrate that protected areas are not a luxury for rich societies, but an essential tool to keep the welfare of society as a whole, and therefore an obligation of any public policy.

## 4.5 The “ideal” protected area

*By Zoltan Kun (PanParks)*

I don't like to comment the various hypotheses. They are all fine to me, as they represent Michael Jungmeier's view on protected areas. I congratulate him for the courage of making this exercise! However I have my own hypotheses about the Parks 3.0, which I call “The Ideal Protected Area”. Such an ideal area suits the following requirements:

- The protected area of the future is the place you want to be! People (the ignorant public) know about these places, they love them, therefore they care about them! This means there is an excellent communication strategy for protected areas. No politician will be brave enough to suggest a budget cut for a state-run protected area.
- The protected areas of the future are the best work places of all! These are the places where people really want to work! Let me give you an example: The top news of Le Monde in 2013: Christine Lagarde resigns as Head of IMF and starts working in Mercantour National Park as the park's chief economist.
- The future parks are not designed based on political boundaries or realities but based on biodiversity needs.
- The future protected area system or network is balanced between intervention and non-intervention management. 50 per cent of all protected areas represent wilderness.
- The Parks 3.0 are places where the income is based on diverse activities. The public funding is only one of the sources, but an important one which covers the core costs of the protected area.
- The management of parks does not depend on the results of political elections.
- Parks 3.0 will run five different audit processes regularly: management audit (confirming that it is a good place to work), biodiversity audit (a place that meets is primary objective), financial audit (the funding available is used cost-efficiently), visitor management audit (the visitors are satisfied with the services), local impact audit (the local communities can maximise their benefits out of the protected area but not against the biodiversity protection goals).



## 5 CONCLUSIONS AND RECOMMENDATIONS

### *Times are changing*

In Europe, the idea of protecting larger pieces of land in order to preserve their natural assets has been developed in the 20th century. Meanwhile, fundamental changes occurred in society: in our way of living, working and thinking. Although the principal concept of protected areas remained, the respective management approaches changed accordingly. In the course of the time, the tasks of protected area managers have been enlarged substantially. Depending on the respective category and the political or societal priorities, they range from mere conservation of species, based on bans and control, to an integrated development of the region in cooperation and accordance with different stakeholders. It can be assumed that this development will continue. Our society will always be in transition, and the way of managing protected areas will always mirror the attitudes and values of the current society. Thus, we recommend protected area institutions or park staff to keep an eye on societal trends and changing perceptions or needs of local stakeholders and visitors, for example by applying methods of future research (e.g. organisation of future workshops) or by considering the general predictions of renown futurologists (e.g. societal megatrends as defined by Matthias Horx). By realising and reflecting larger trends in due time, management strategies can be adapted accordingly.

### *People's call for having a say*

Most likely, in the coming years, bottom-up processes will further gain in importance – in society in general, but also in protected areas management. Thus, in future parks, people's involvement has to be set as a fundament for well-designed co-management structures. Interest in nature conservation and sustainable development has to be raised in broad societal strata in order to ensure the active involvement of a sufficient number of stakeholders who are willing to shape the development of their region. Unfortunately, experiences show that bottom-up processes are time consuming, partly nerve-wracking and not always constructive. In order to avoid that participation ends up with fruit-less discussions or provokes



manifold conflicts, clearly defined targets, rules and regulations have to be agreed on. Creative ways of collaboration in a multidisciplinary environment are just as needed as “translators” who are able to bridge science and management needs on the one hand, as well as society and nature conservation concerns on the other hand.

### *Quality versus quantity*

More than 100 years after the first national park has been established in Europe, we have to ask ourselves if our existing protected area system and the related management approaches have achieved the major goal of efficiently preserving biodiversity and ecosystem services in Europe. Roger Croft, IUCN WCPA Emeritus, at least, is sure that we have failed so far. According to him there are still too many „paper parks” in Europe and elsewhere. Besides, parks are often subject to political manipulation and reductions in resource allocation, and targets of mining companies, agriculturalists or foresters. Furthermore, they never will be able to achieve their conservation goals if they remain “islands of protection” in a “sea of devastation”. Consequently, the quality of protected areas management has to be improved, in fact not only in terms of the management efficiency of the designated site, but also in terms of integrating adjoining areas, ecological corridors and the unprotected areas in between into the conservation efforts. The focus on quality seems to be even more essential as nowadays several protected areas are mainly designated as potential growth engines for regional economies or peripheral tourist destinations. Of course, it can be questioned, if in times of financial shortages the quality of parks can really be improved while at the same time the number and size of protected areas is increased as required by the Convention on Biological Diversity (Aichi Biodiversity Target 11). Facing up to the given facts, probably it is more advisable to primarily focus on improving our existing parks and better integrating them into the wider landscapes before expanding the preserved areas rapidly.

### *Wilderness, new trend in nature conservation*

Experts such as Zoltan Kun from PanParks call for designating future protected areas in response to biodiversity needs, instead of following political or societal priorities. But what does this mean? In fact, for a long time, there was little discussion about which kind of nature actually needs to be preserved. Shall we protect selected species, or direct our conservation activities to particular sites with a maximum number of different species (which implies that in Europe we mainly would have to preserve extensively used cultural landscapes, requiring an active management). Or shall we rather focus our efforts on the last remaining near-natural areas and ensure that natural processes are able to flow with minimum human interfer-

ence? It seems that in future we more discussions on these crucial questions. Mario Broggi, a private scholar how is active in many conservation organisations, criticizes that in Europe, in the last decades, we have been concentrating too one-sided on the conservation of rare species. To date, we have very few answers about the why and how of species' survival. Thus, we have to allow natural processes and learn how to "manage the unknown" which requires broad mental acceptance by society. It may be assumed, that in Europe wilderness conservation will highly gain in importance. In the past, most of our land surface has been converted to cultural landscapes. Thus on the one hand it seems likely to intensify our focus on the preservation of the last reference areas in which natural processes are still allowed to proceed freely, even if the direction of their development will remain unpredictable. On the other hand, many people in Europe are increasingly longing for real nature experiences. It is no wonder, that for example the initiative "Rewilding Europe" was mainly launched by groups from the Netherlands, a country which has cleared its forests long time ago and engaged in intensive farming business so that almost no pristine natural areas are left.

#### *Parks as balm for the soul*

Many of us are living in highly industrialised environments, having a highly structured life, and are being permanently stressed for time. Thus an increasing number of people hope to find a counterworld in protected areas, in which silence, recreation and inspiration can be enjoyed. Consequently, in the future, parks may have to fulfil additional tasks: besides sheltering plants and animals they might have to serve as sanctuaries for all those who are searching for the absence of human civilisation in order to replenish their energies. This development may be reflected in the invention of new labels, such as „parks of dark sky“, „parks of silence“, „health parks“, „spiritual parks“ or “internet free zones”. However, the current orientation of many protected areas towards attractions and sophisticated visitor infrastructure may prevent us from reconnecting ourselves to nature. Thus, high tech information centres might be outdated soon, as people will increasingly look for real nature experiences instead of learning arbitrary facts in technically upgraded exhibitions. They want to be fully offline, just listening to wolf's howling somewhere out in nature, instead of playing indoor with computers. Besides, in times of small budgets and scarce workforce, resources might be withdrawn from prestigious projects, which are expensive to build and to maintain, anyway. Generally, future parks might stand for a different relationship of humans to nature: Nature might not be seen as an object anymore which has to be shown to and interpreted for people. Instead, people might re-develop a feeling of being part of this

nature while experiencing the wild outside. However, in many parts of Europe, preserving larger patches of land with only little human intervention is a relatively new concept. It is to be expected that any attempt of establishing wilderness areas will cause several problems, ranging from complaints about the loss of aesthetic cultural landscapes (such as Alpine pastures) to fears of the return of large carnivores (such as wolves and bears). Thus, allowing more natural dynamic processes in protected areas will require re-discovering the concept of wilderness in our minds. Methods of how to deal with the presence of large carnivores have to be adopted from societies who are still used to live together with those animals smoothly.

### *Our cultural heritage*

Nevertheless, much would be lost, if we would allow all protected areas to return to wilderness. In Europe, our regionally diverse cultural landscapes are of great inherent value as they reflect the long history of human development. Furthermore, the different land use forms created different habitats for many – mainly open land – species. In order to reconcile land use and biodiversity conservation, an efficient small-scale agriculture with high respect for nature has to be promoted (e.g. certified organic agriculture), and harmful subsidies have to be reduced. In addition, we need stimulants for more extensive forms of agriculture, such as the use of robust grazing animals (e.g. particular cattle or sheep breeds) that are kept outside throughout the year in low density herds. Those animals keep the landscape open and their meat can be put on the markets as local speciality which adds to the unique selling proposition of a particular region.

### *Model regions for sustainable development*

Several studies show that protected areas have the potential to stimulate tourism development, and thus generate income for different businesses in the park and its neighbourhood. Therefore, more and more protected areas are designated in order to stimulate the economies of peripheral regions (e.g. Park Adula, Switzerland). The focus on socio-economic development, however, may water down nature conservation efforts in parks. Quite often, improving the economic wellbeing of the people means increasing their ecological footprint, and thus the pressure on nature. In order to leave this vicious cycle, management teams shall not only aim at increasing the socio-economic benefits for local populations, but simultaneously focus on minimising the consumption of natural resources. In this respect, future parks should become counter models to the current economic development, instead of just being motors for economic growth in marginalised regions. The concept of sustainable development is condemned to become a “paper tiger” if not implemented in practice. Protected areas of the future are more and more expected to be the

places, where nature conservation requirements are really reconciled with the development needs of mankind. This task, however, is not restricted to the development and marketing of some regional brands for sustainably produced goods (e.g. agricultural products or handicrafts) – just to mention one popular example for sustainable development approaches in parks. In fact, the commenting experts claimed that protected areas should become facilitators for inducing changes in people's life-style in order to achieve a general reduction of our ecological footprint in all areas of life. Instead of promoting "green economy" in parks, a pretty undefined and thus somehow dangerous term, the ecological footprint concept might be useful to measure the degree of sustainability of certain economic activities. As knowledge brokers, protected areas may even be able to induce changes outside their boundaries, for example by influencing regional, national or even international policies.

#### *Between tradition and avant-garde*

Revaluing and further developing traditional land use forms might lead to a sustainable use of the natural resources. However, sticking to traditions may also hinder innovation which is needed to cope with new challenges, such as the impacts of climate change. Ideally, future parks shall be the places where tradition and innovation meet. Therefore, highly skilled and open-minded staff is needed, including free spirits and lateral thinkers who brake with traditions and try something totally different. Park administrations are encouraged to provide for a diverse team with a balanced age and gender structure, and with people coming from different disciplines and backgrounds. Generally, new communication techniques and fast internet connections may further stimulate the migration of broad-minded people from urban to rural areas in search of alternative life-styles. This trend may contribute to maintain the balance between tradition and avant-garde in peripheral park areas.

#### *Public services require public funding*

Still, in many countries it is accepted that protected areas are fulfilling manifold public functions, and thus have to be funded by public authorities. However, in times of financial shortfalls, park staff is increasingly asked to generate additional income from different sources (e.g. project-based financing, private sponsoring, or entrance fees). Our experts, however, agreed that protected areas have to be defended as public commons, as they are providing valuable public services. Just as policemen do – and nobody would expect the police to supplement their budget by selling goods or searching for sponsors. Even if some protected areas will be able to raise additional money for particular expenses, public money will always be necessary for covering the basic costs. Totally self-financed protected areas will be

rare, even in the future. It might be tempting to be completely free from political influence, but self-financed parks either depend on large visitor numbers which might counteract nature conservation objectives, or on the requirements and respective agenda of some private sponsors who quickly can change their minds. Thus, public money shall be the main pillar of funding even for future parks. In order to achieve this, park administrations have to intensify promoting the societal benefits of their protected areas.

### *Ongoing challenge*

Concluding it can be said that the efficient management of protected areas always was – and probably always will be – a big challenge. Even if some global tendencies seem to be visible (as sketched in chapter 3.1.2), management approaches differ substantially according to the respective category, to regional or national priorities, and to political requirements. The only proven fact is that so far we have not achieved our biodiversity conservation goals as defined by international conventions. Thus, future park managers and decision-makers will have to increase their efforts, and probably also to change their management approaches in order to adapt to upcoming new challenges and new demands triggered by environmental and societal changes. Hopefully, the present results of the discussion of the hypotheses on Parks 3.0 will help to stimulate new ideas and maybe even to find some answers to pending questions of the current and future time.

Thanks a lot to all who contributed to this fruitful and inspiring discussion.

## 6 LITERATURE

DRUCKER, P. (2007): *Managing in the Next Society*. Elsevier. Revised edition.

HORX, M. (2011): *Das Megatrend-Prinzip. Wie die Welt von morgen entsteht*. Deutsche Verlagsanstalt, München.

IMBODEN, Ch. (2007): *Management of Protected Areas – a global perspective*. Unpublished materials for MSc „Management of Protected Areas“, University of Klagenfurt.

JUNGMEIER, M. (2011a): *Integriertes Management von Schutzgebieten. Beiträge zu Konzept, Prinzipien, Expertensystem und ausgewählten Instrumenten*. Dissertation. University of Greifswald, Germany.

JUNGMEIER, M. (2011b): *In Transit towards a Third Generation of Protected Areas? Concepts, Principles and Activities in the Integrated Management of Protected Areas*. In: *International Journal of Sustainable Society*. Paper accepted in 2011, to be printed probably in 2014.

LANE, B. (2010): *Generations of Protected Areas*. Oral contribution to the project „Policy for Harmonizing National Park Management and Local Business Development“, Sogndal.

MOSE, I. (2005): *The value of large protected areas for rural development in Europe*. Unpublished materials for MSc “Management of Protected Areas”, University of Klagenfurt.

PHILLIPS, A. (2003): *Turning Ideas on Their Head. The New Paradigm For Protected Areas*. The George Wright FORUM.

SCHEDLER, K. and PROELLER, I. (2010): *Outcome-Oriented Public Management. A Responsibility-Based Approach to the New Public Management*. Information Age Publishing, Inc. Charlotte, NC, 254 p.

WEIXLBAUMER, N. (1998): *Gebietsschutz in Europa: Konzeption – Perzeption – Akzeptanz. Ein Beispiel angewandter Sozialgeographie am Fall des Regionalparkkonzeptes in Friaul-Julisch-Venetien*. Beiträge zur Bevölkerungs- und Sozialgeographie, Bd. 8, 414 S.

WEIXLBAUMER, N. (2005): Auf dem Weg zu innovativen Naturschutz-Landschaften – Naturverständnis und Paradigmen im Wandel, *In: BfN-Reihe „Naturschutz und Biologische Vielfalt“, Heft Naturschutz im gesellschaftlichen Kontext*, Münster: Landwirtschaftsverlag Münster.

WEIXLBAUMER, N. (2010): Großschutzgebiete in Europa – Ansprüche, Entwicklungen und Erfolgsfaktoren, *In: Verband österreichischer Naturparke (ed.), Neue Modelle des Natur- und Kulturlandschaftsschutzes in österreichischen Naturparken (14–24)*, Graz: Verband österreichischer Naturparke.

## 7 PARTICIPATING EXPERTS AND AUTHORS

### 7.1 Abbreviations of commenting experts

- BKS: Bender-Kaphengst, Svane (Germany): Head of Africa Program at the Nature and Biodiversity Conservation Union (NABU)
- BR: Blackman, Richard (UK): Development Adviser to EUROPARC Atlantic Isles
- EH: Egner, Heike (Austria): Head of the Institute of Geography and Regional Studies at the University of Klagenfurt
- FKM: Fischer-Kowalski, Marina (Austria): Director of the Institute of Social Ecology at the Alpen Adria University, Vienna.
- GM: Getzner, Michael (Austria): Institute for Public Finances and Infrastructures, Technical University Vienna
- IA: Ionita, Alina (Romania): Independent PA expert, currently working for ProPark Foundation in Romania
- KG: Köck, Günter (Austria): Executive Secretary of the Austrian MAB National Committee, Representative of Austria to the MAB-ICC, Vice Chair of the MAB Programme
- KY: Kohler, Yann (France): Alpine Network of Protected Areas; Task Force Protected Areas, Permanent Secretariat of the Alpine Convention
- KZ: Kun, Zoltan (Hungary): Director of Pan Parks
- LA: Lang, Alois (Austria): Head of Public Relations and Ecotourism in National Park Neusiedler See
- LS: Lange, Sigrun (Germany): E.C.O. Germany, Munich
- MC: Manzano, Carl (Austria): Director of Danube Floodplane National Park
- MM: Mertz, Michael (Germany): Independent consultant, Freiburg/Brsg



- MM-2: Meyer, Michael (Germany): Ecological Tourism in Europe
- MR: Moser, Ruth (Austria): Director of Biosphere Reserve Great Walser Valley
- PC: Papp, Cristian-Remus (Romania): WWF International Danube-Carpathian Programme, Head of Protected Areas,
- PD: Pokorny, Doris (Germany): Rhön biosphere reserve, Germany
- PKC: Pichler-Koban, Christina (Austria): E.C.O. Institute for Ecology
- PP: Puchala, Peter (Slovakia): Protected Landscape Area Malé Karpaty
- PG: Plassmann, Guido (France): Director of the Alpine Network of Protected Areas (ALPARC)
- PP: Petridis, Panos (Austria): Researcher at the Alpen Adria University, Institute of Social Ecology Vienna.
- PP-2: Philippe Pypaert (Italy): Programme Specialist at the UNESCO Venice Office – Regional Bureau for Science and Culture in Europe
- RB: Reutz, Birgit (Switzerland): Lecturer at the Zurich University of Applied Sciences, Institute of Environment and Natural Resources: Centre for Tourism and Sustainable Development Wergenstein.
- RL: Reyriink, Leo (Netherlands): Director Dutch-German Cross Border Park Maas-Swalm-Nette
- SA: Sovinc, Andrej (Slovenia): IUCN, WCPA Europe (member of the advisory board of the MSc Programme “Management of Protected Areas”)
- SE: Stanciu, Erika (Romania): President of the ProPark Foundation for Protected Areas Romania
- SJ: Svajda, Juraj (Slovakia): Assistant at Faculty of Natural Sciences, Matej Bel University Banská Bystrica
- SKS: Stoll-Kleemann, Susanne (Germany): Chair of Sustainability Science and Applied Geography at the University of Greifswald, Germany
- ST: Schaaf, Thomas (France): Director a.i., UNESCO Division of Ecological and Earth Sciences, and MAB Programme
- SS: Santi, Stefano (Italy): Director of the Parco Naturale delle Prealpi Giulie
- TJ: Tabone, Joanna: Malta.
- WN: Weixlbaumer, Norbert (Austria): University of Vienna, Department of Geography and Regional Research

## 7.2 Information on the authors



JUNGMEIER, Michael (*CEO of E.C.O. Institute of Ecology, Austria; Senior Scientist at the Institute of Geography and Regional Studies, University Klagenfurt*) is specialised in planning and consulting protected areas, mainly in Europe, but also in Central Asia and Africa. He is expert in communication and participation design, the interface between biodiversity conservation and regional development. Since 2004 he is Managing Director of the MSc Programme “Management of Protected Areas” at the University of Klagenfurt. Besides, he is lecturing at several other universities in the field of project management and protected area planning.



LANGE, Sigrun (*CEO of E.C.O. Germany, Germany*) holds a Diploma Degree in Biology from the University of Bayreuth, Germany, and an MSc Degree in Protected Areas Management from the University of Klagenfurt, Austria. Since almost 20 years she works in the field of biodiversity conservation management and public relation, with field experiences in Latin America, East Africa, and South East Asia. Since seven years she is dealing 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 specialised on communication, management and planning processes in protected areas.

### 7.3 Information on the commenting experts and guest commentators



BENDER-KAPHENGST, Svane (*Head of the Africa Programme at NABU, Germany*): Svane obtained her diploma in Landscape Ecology and Nature Conservation at the University of Greifswald (2001). Since 2005 she works with the Nature and Biodiversity Conservation Union (NABU) where she became Head of the Africa Programme in 2009. In Ethiopia, she successfully supported the establishment of Kafa Biosphere Reserve. Recently, she supports Lake Tana area becoming a UNESCO biosphere reserve.



BLACKMAN, Richard (*Development Adviser to EUROPARC Atlantic Isles, UK and Ireland*): Richard brings extensive experience from his previous role as Deputy Director of the EUROPARC Federation, where he was instrumental in the development of the European Charter for Sustainable Tourism in protected areas and in establishing protected areas' representation in Brussels. Prior to that he worked for a think tank in London, where he worked on a number of studies in the field of European politics, economics and citizenship, including future scenarios for Europe.



BROGGI, F. MARIO (*private scholar, active in several conservation foundations*) studied Forestry at the ETH Zürich and holds a PhD from the University of Natural Resources and Life Sciences in Vienna. He qualified as a professor at Vienna University and lectured on nature conservation and Alpine land use at the Universities of Basel and Vienna. From 1982 to 1991 he was President of the International Commission for the Protection of the Alps (CIPRA), and later, from 1997 to 2004, Director of the Swiss Federal Institute for Forest, Snow and Landscape Research in Birmensdorf, Switzerland.



CROFT, ROGER (*IUCN WCPA Emeritus*) is a geographer specialised in geomorphology in his early career. He worked in central government as researcher, adviser and administrator, and was the first CEO of Scottish Natural Heritage. He now advises anybody who will listen in Scotland, Iceland and around Europe on environmental strategy and policy, and through writing and lecturing hopes to help people to understand the Earth's heritage and environment. Roger has been a member of IUCN WCPA since 1996, undertook a major review in 1998, was Regional-Vice Chair Europe 2000-08, and chaired the Durban Accord Working Group. He is now a WCPA Emeritus. Roger also chaired the IUCN UK Committee 1999-2002 and has been chairman of two IUCN members Plantlife and Sibthorp.



EGNER, Heike (*Head of the Institute of Geography and Regional Studies at the University of Klagenfurt, Austria*): As of October 2012, Heike is scientific director of the MSc Programme "Management of Protected Areas" at the University of Klagenfurt. Her research interest focuses on interrelations of society/humans and environment/nature with particular focus on sustainable regional development, global change dynamics and education for sustainable development, geographical risk research and conflict research, as well as protected areas.



FISCHER-KOWALSKI, Marina (*Director of the Institute of Social Ecology at the Alpen Adria University, Vienna, Austria*): Marina received a PhD in Sociology from the University of Vienna, but later involved in interdisciplinary work, founding the Institute of Social Ecology in Vienna, and becoming Professor of Social Ecology at the Alpen-Adria University. She has published scientifically in industrial ecology and sustainable development, and currently is President of the International Society of Ecological Economics. She is member of the MAB Committee of the Austrian Academy of Sciences. Recently, she received an Honorary Citizenship on the Island of Samothraki, Greece, for her efforts to found a biosphere reserve there.



GETZNER, Michael (*Full Professor at the Centre for Public Finance and Infrastructure Policy at the Technical University Vienna, Austria*): Michael's main fields of research are public finance, infrastructure policy, ecological economics, and regional policy. Before becoming Full Professor at the Technical University of Vienna, he served as an Associate Professor of Economics at the University of Klagenfurt (1997 to 2010). Besides, from 2004 to 2010, he was the Academic Director of the MSc Programme "Management of Protected Areas".



IONITA, Alina (*Project Manager at ProParks Foundation for Protected Areas, Romania*): Alina finished her MSc and PhD studies at the Faculty of Geography and Geology within Alexandru Ioan Cuza University of Iași, Romania and holds an MSc degree in Protected Areas Management from the University of Klagenfurt, Austria. Her professional experience is related to the fields of ecotourism, participatory management, governance, and management planning related to protected areas in Romania and in the Eastern European countries.



**KÖCK, Günter** (*Coordinator of the national and international research programmes of the Austrian Academy of Sciences, Austria*): Günter studied Biology at the University of Innsbruck, Austria. His research focuses on biomonitoring of aquatic ecosystems. Since 1997 he has been leading projects of the Austro-Canadian research cooperation High-Arctic. In 2004 he became coordinator of the national and international research programmes of the Austrian Academy of Sciences. He is the Austrian delegate to the International Coordinating Council of UNESCO's MAB Programme. In 2004, 2010 and again in 2012, he was elected as Vice-Chair of the MAB Programme. Since 2009 he is co-editor of the scientific journal "eco.mont".



**KOHLER, Yann** (*Project Coordinator at ALPARC, the Alpine Network of Protected Areas, France*): Yann studied Forestry and Environmental Sciences in Freiburg, Germany, and Cordoba, Spain. He did his PhD thesis at the Institute for Alpine Geography in Grenoble, France. Since 2004, he is working for ALPARC on the topics of biodiversity and ecological connectivity. From 2009 to 2011 he coordinated the activities of the Platform Ecological Connectivity. He cooperated in various international projects, like the Ecological Continuum Initiative, and the working group Green Infrastructure of the European Commission.



**KUN, Zoltan** (*Director of Pan Parks, Hungary*): Zoltan attained a Forestry Technician Diploma at the secondary school in Sopron, Hungary in 1990 and graduated with an MSc in Landscape Architecture in Hungary at the University of Horticulture and Food Industry in 1996. The same year, Zoltan started working with WWF Hungary as coordinator of the Gemenc Foodplain restoration project. He joined the PAN Parks Initiative in August 1997 as Conservation Manager, and was appointed Executive Director in March 2002.



LANG, Alois (*Head of Public Relations and Ecotourism at National Park Neusiedler See, Austria*): In the 1980ies, Alois was tourist manager on the local and regional level in the Neusiedler See area, focusing on the development of nature experience products. He was involved in the planning and establishing phase of the transboundary National Park Neusiedler See. Since 1993 he is Head of the Department for Public Relations and Ecotourism of the national park. He contributed to various projects in protected areas dealing with ecotourism, mainly in Austria and in Romania (Danube Delta). From 2005 to 2008, he was released from his job for acting as IUCN's coordinator for the European Green Belt Initiative.



MANZANO, Carl (*Director of Donau-Auen National Park*) is a biologist with a post-graduate diploma in Political Science. He had been involved in the contest for the National Park in the early 1980s and became secretary of the Government Commission to draft the first concepts for a National Park along the Danube between Vienna and Bratislava. From 1988 to 1995 he was Director of the „Thistle Association“, a NGO bent on preserving and fostering rural areas designing and implementing agro-environmental pilot schemes. Since the establishment of Donau-Auen National Park in 1996/97, Carl is serving as Park Director.



MERTZ, Michael (*Independent consultant, Germany*): From 1995 to 2001, Michael studied Forest Science at the University of Freiburg/Breisgau, Germany. In addition, he holds an MSc Degree in “Management of Protected Areas” from the University of Klagenfurt, Austria. Since 2001, he works as freelance consultant in the fields of forest and wildlife management and conservation.



MEYER, Michael (*Project Manager at ETE, Ecological Tourism in Europe, Germany*): Michael started his career as a consultant for managing tourism facilities. For about 15 years, he was working on quality assessment and staff trainings. Then he shifted as free-lancer to Ecological Tourism in Europe where he specialized in sustainable tourism development in and around protected areas (with focus on Central and Eastern Europe). He coaches tourism planning processes, trains local communities and entrepreneurs, and applies international assessment tools.



MOSER, Ruth (*Director of Großes Walsertal Biosphere Reserve, Austria*): Ruth studied Landscape Planning and Landscape Architecture at the University of Natural Resources and Applied Life Sciences in Vienna. She also holds a certificate for Agricultural and Environmental Education. Since 2006 she is the Manager of the Grosses Walsertal Biosphere Reserve in Austria. She is responsible for the strategic planning and implementation of projects in the fields of regional development, research, conservation, environmental education, and public participation, in accordance with the goals set by the biosphere reserve.



MUGICA, MARTA (*Director of the Fundación Fernando González Bernáldez, Coordinator of EUROPARC Spain*): Marta holds a PhD in Biology from the University Autónoma de Madrid. Since her engagement with EUROPARC Spain in 1994 she coordinated various strategic processes such as the Action Plan for Protected Areas in Spain. Currently she is leading a participative process on the future perspectives of parks. Besides, she is lecturer in the academic master programme “Espacios naturales protegidos” which is run by the Fundación Fernando González Bernáldez. In appreciation of her great commitment for nature conservation, in 2003, she received the Alfred Toepfer Medal from the EUROPARC Federation.





PAPP, Cristian-Remus (*Head of Protected Areas at WWF's International Danube-Carpathian Programme, Romania*): Cristian holds an MSc degree in Management of Protected Areas from the University of Klagenfurt. He has over ten years of working experience in the field of nature conservation, out of which eight in protected areas related activities. Currently, he is supervising projects related to protected areas and large carnivores. He is also a trainer and associate lecturer in the field of protected area management at the Babes-Bolyai University in Cluj-Napoca. He is co-founder and member of several NGOs and member of the Scientific Council of the Maramures Nature Park in Romania.



POKORNY, Doris (*Deputy Head of the Bavarian administration unit of Rhön Biosphere Reserve, Germany*): Doris is trained in Landscape Ecology, and holds an MSc Degree from the University of Technology in Munich, Germany. Since 1991, she works in Rhön Biosphere Reserve as research coordinator and project manager in public relations work. Besides, she is involved in the international activities of the biosphere reserve which keeps cooperation with the Kruger-to-Canyons Biosphere Reserve in South Africa.



PUCHALA, Peter (*Zoologist at Malé Karpaty Protected Landscape Area, Slovakia*): Peter holds a Diploma Degree in Biology and a PhD Degree in Ecology from the Comenius University in Bratislava, Slovakia. Besides, he holds an MSc Degree in Management of Protected Areas from the University of Klagenfurt in Austria. Since almost ten years, he works in the field of protected areas and nature conservation. He participated in the establishment, monitoring, and management of the NATURA 2000 network in Slovakia. He is a member of several environmental NGOs (e.g. Birdlife Slovakia, WOLF – forest protection movement) and was involved in the designation of some private protected areas in Slovakia.



PLASSMANN, Guido (*Director of ALPARC, the Alpine Network of Protected Areas, France*): Guido studied Geography and holds a PhD from the University of Grenoble, France. Since 1993, he is involved in the framework of the Alpine Convention (French presidency 1992–1994). When ALPARC was founded in 1997, he became Director of the institution. He coordinates numerous international projects related to protected areas in the Alps and the Carpathian mountains, e.g. European programmes, international events of the network, partnerships and exchange programmes for Alpine protected areas, publications, exhibitions, scientific programmes of the protected areas etc.



PETRIDIS, Panos (*Researcher at the Alpen-Adria University, Institute of Social Ecology in Vienna, Austria*): Panos was educated as biologist. He holds a Bachelor and two Master Degrees from the Universities of Bristol, Edinburgh and Plymouth (UK). He has worked extensively on marine issues, in the fields of cetacean behaviour and ecotoxicology. Currently, he is a researcher and doctoral candidate at the Institute of Social Ecology in Vienna, working on issues of island sustainability, protected area management as well as broader socio-ecological transitions.



PICHLER-KOBAN, CHRISTINA (*Member of E.C.O. Institute of Ecology in Klagenfurt*): Christina holds a Diploma Degree in Landscape Planning from the University of Natural Resources and Applied Life Sciences in Vienna. In the last fifteen years she worked on the development of regional brands, analysis of cultural landscape patterns, visitor's infrastructure (e.g. interpretive trails), project coordination and assistance (e.g. participation processes). Actually she focuses on analysing the interface between ecological planning and social sciences, history of conservation in the socio-political context, and historic and future conceptions in conservation.



PYPAERT, Philippe (*Programme Specialist at the UNESCO Venice Office, Italy*): Philippe graduated in Belgium (1985) as an Agricultural Engineer and pursued a PhD in Environmental Sciences. He joined UNESCO in 1994, where he is acting as a Programme Specialist in Environmental Sciences. He coordinates activities related to UNESCO's MAB Programme and its network of Biosphere Reserves, and to the International Hydrological Programme. He also coordinates the implementation of various projects funded by donors concerning Venice and its lagoon and Education for Sustainable Development.



REUTZ, Birgit (*Lecturer at the Zurich University of Applied Sciences, Institute of Environment and Natural Resources: Centre for Tourism and Sustainable Development Wengenstein, Switzerland*): Birgit holds a Diploma Degree in Geography from the University of Innsbruck, Austria. Between 1998 and 2000 she worked for CIPRA International. Afterwards she became Managing Director of Großes Walsertal Biosphere Reserve. For her achievement, in 2006, she received UNESCO's Michel-Batisse Award. From 2007 until 2012 she did her PhD study "Benefit of Protected Areas for local People" at the University of Innsbruck and finally started working as lecturer at Zurich University of Applied Sciences in 2012.



REYRINK, Leo (*Director of the Cross Border Park Maas-Swalm-Nette*): Leo holds a Diploma Degree in Biology from the Radboud University Nijmegen, the Netherlands. Between 1982 and 1990 he was a scientific employee in the Dutch Ministry of Agriculture, Nature and Fisheries and was involved in the Dutch Program for the protection of wetlands through contracts with farmers. From 1990 to 2002 he was Director of the Biological Station Krickenbecker Seen in Viersen, Germany. Finally in 2002 he became Director of the Dutch-German Cross Border Nature Park Maas-Schwalm-Nette.



RUOSS, ENGELBERT is senior advisor & lecturer at universities mainly in Europe in the field of sustainable development, management of protected cultural and natural heritage sites and international cooperation. He is former Director of the UNESCO Office in Venice. Before joining the UNESCO he was consultant and trainer in regional management projects of EU programmes. He also acted as Manager and Director of the Entlebuch Biosphere Reserve in Switzerland and was member of the Central Committee of the Swiss Academy for Natural Sciences and the Swiss UNESCO National Commission. He holds a PhD in Biology and a Master of Museology from the Universities in Bern and Basel.



SOVINC, Andrej (*Director of Secovlje Salina Nature Park, Slovenia, and IUCN WCPA Regional Chair for Europe*): Andrej started his career as ornithologist, writing proposals for the establishment of bird reserves in Slovenia. Trained as hydrologists, wetland and river restoration projects raised his general interest for protected areas and he decided to do a PhD study on protected area systems. While coordinating several contributions to “IUCN Parks for Life Action Plan for Protected Areas” he learned a lot about protected area policies. As manager of the Secovlje Salina Nature Park he got the chance to dive deeply into the practical needs and challenges of protected areas.



STANCIU, Erika (*President of the ProPark Foundation for Protected Areas, Romania*): Looking back on twelve years in forest management and fourteen years in protected area and conservation work in Romania and the Danube and Carpathian ecoregions, Erika has a lot of practical experience in protected areas management. She established the first national park administration in Romania in the Retezat National Park, and supported the establishment of the Natura 2000 network. For more than nine years, Erika was involved in the work of the EUROPARC Federation. Currently she focuses on capacity building measures for protected area managers and stakeholders.



SVAJDA, Juraj (*Assistant at the Faculty of Natural Sciences at the Matej Bel University Banská Bystrica, Slovakia*): Juraj graduated and completed his PhD studies at the Faculty of Ecology and Environmental Sciences at the Technical University in Zvolen. Afterwards, he worked for the Slovak Ministry of the Environment, and for the administration of Tatra National Park and Biosphere Reserve. Later he served two years at the Institute of High Mountain Biology in Tatra Mountains. He is a member of the Slovak Ranger Association, the Slovak Ecological Society and the Slovak Committee of UNESCO's MAB Programme.



STOLL-KLEEMANN, Susanne (*Chair of Sustainability Science and Applied Geography at the University of Greifswald, Germany*): Susanne is an interdisciplinary social scientist, who focuses on human-nature relations, especially in the areas of biodiversity and protected area management. Third party funded projects include the Governance of Biodiversity research project, and the project on "Protected areas management effectiveness assessments in Europe". She also worked at the Humboldt University of Berlin, the Swiss Federal Institute of Technology, and the Potsdam Institute for Climate Impact Research. She is a member of the Advisory Board of DIVERSITAS Germany.



SCHAAF, Thomas (*Director a.i. of UNESCO's Division of Ecological and Earth Sciences, and Secretary a.i. of UNESCO's MAB Programme, France*): Thomas studied at the University of Freiburg (Germany) and Ohio State University (USA). He holds a Phd Degree in Geography. He was Assistant Professor in Geography at the University of Freiburg (1985-1987), Associate Expert with UNESCO Headquarters in Paris (1987-1990), and Programme Specialist for drylands and mountain ecosystems at UNESCO's Division of Ecological Sciences (1990-2008). From 2008 to 2012 he was Chief of the Ecological Sciences and Biodiversity Section at UNESCO. In August 2012, he became Director a.i. of UNESCO's Division of Ecological and Earth Sciences.



SANTI, Stefano (*Director of the Parco Naturale delle Prealpi Giulie in Resia, Italy*): Stefano graduated as an Agronomist at the University of Udine, Italy. He was involved in international cooperation projects concerning agricultural development in Brazil. He is specialized in organic farming, land planning, and rural sustainable development. Since 1999 he is Director of Prealpi Giulie Nature Park in Italy. Currently he is Vice-President of Federparchi's technical advisory committee and member of EUROPARC's TransParcNet working group.



TABONE, Joanna (Malta): Joanna has ten years of experience in protected area management. She was responsible for the inventory, designation, and management of a number of protected areas in Malta. She is experienced in project development and management, including projects funded by INTERREG, LIFE+, and the Cohesion Policy funds. Her passion for nature has taken her to various protected areas in Europe, Asia and Africa, where she also offers her expertise as a UN Volunteer.



WEIXLBAUMER, Norbert (*Associate Professor at the Department of Geography and Regional Research at the University of Vienna, Austria*): Norbert holds a PhD from Salzburg University. He is author of various publications on protected areas and regional development in Europe as well as on transboundary cooperation. At present he is involved in several projects regarding the direct and indirect impacts of territorial planning initiatives on rural regions.

## **THE KLAGENFURT MPA PROGRAMME**

In 2005, in co-operation with international institutions such as IUCN, WWF, CBD, RAMSAR, UNESCO and prominent protected areas, the University of Klagenfurt and E.C.O. Institute of Ecology designed the international MSc programme "Management of Protected Areas" (MPA). It is embedded into the international network of institutions working in the field of biodiversity conservation and protected areas. The programme is conceptualised to meet the needs of participants working in companies and institutions in the field of nature and environmental conservation and policy. It tries to combine classical academic knowledge with practical expertise and the implicit knowledge of its diverse participants. This should lead to a more effective transfer of knowledge at the level of competences. The present discussion on the future prospects of protected areas management was amongst other things initiated to keep the content of the international training updated and relevant, so that it will be able to meet the needs of future protected area managers.

We learned from the reactions to our hypotheses that it might be rewarding for park managers to regularly follow general societal trends, and to reflect how these might influence the management activities. Likewise, the respective nature conservation approaches have to be critically reflected time and again in the light of changing perceptions and values in society, and a discussion on the type of nature which shall be preserved has to be initiated. The new interest in wilderness protection and wilderness experiences has to be seized and acted on. This may result in a reduced focus on sophisticated visitor infrastructure and attractions, and an increased focus on outdoor activities for all those who expect to find a counterworld to civilisation in park areas. Consequently, marketing strategies of parks may change from an emphasis on rare or spectacular plants and animals to values related to human needs, such as "parks of silence", "health parks" or "spiritual parks". It is more and more requested that parks not only preserve nature, but stimulate sustainable development, and thus improve the well-being of local people in peripheral regions. However, all too often, the concept of sustainability still remains a "paper tiger", even in protected areas. In the future, parks will not only be expected to



stimulate the marketing of local products, or to develop ecotourism offers; they rather shall become facilitators for inducing changes in people's lifestyle with the aim of reducing the ecological footprint of inhabitants and visitors. As knowledge brokers, they may even become archetypes who inspire national or international politics. Thus, park managers of the future have to be familiar with different forms of low impact land use, and with methods on how to measure the ecological impact of certain activities. Finally, knowledge on the different forms of involving local stakeholders in the decision-making process will become increasingly important, but the limitations of bottom-up processes have to be considered, and an appropriate framework has to be set in order to avoid endless discussions which are coming to nothing.

By cooperating with well-established institutions and nature conservation experts (cp. Fig. 2), and gradually adapting the contents of our MPA Programme, we aim at coping with the current and future requirement of protected area managers.

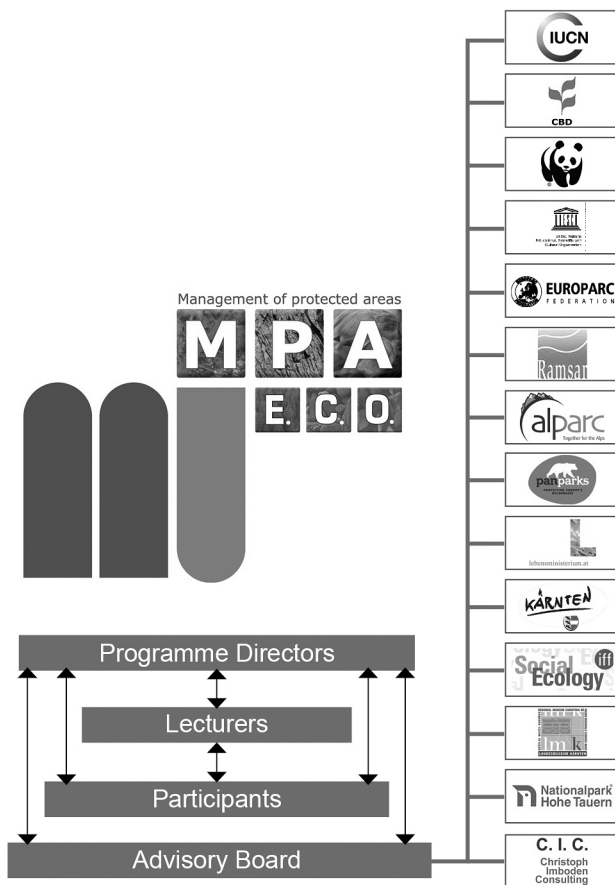


Fig. 2: Overview on the organisational structure of the MSc Programme “Management of Protected Areas” at the University of Klagenfurt. More information can be obtained at: <http://mpa.uni-klu.ac.at/>

Protected Areas are embedded into a societal context and are supposed to serve society. They have to be managed adaptively in a long-term perspective by multi-skilled individuals. The MSc programme provides the educational background and a comprehensive “toolbox” for these professionals. The participants are from several European countries as well as from developing countries (e.g. Armenia, Nepal,

Uganda, Ethiopia, and Ecuador). 50 internationally recognized experts are commissioned as lecturers for the programme.

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.

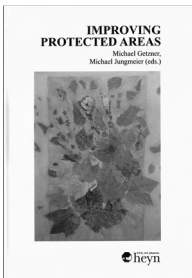
The learning goals are:

- Provision of an excellent and comprehensive understanding of the aims and roles of protected areas in relation to the conservation of biodiversity and (integrated) regional development.
- Provision of detailed knowledge to apply the full range of tools available for the management of protected areas.
- Developing the ability to analyse and solve problems encountered when establishing, planning and managing protected areas, to conduct inter- and transdisciplinary dialogues with all stakeholders and to develop and implement appropriate integrated solutions.
- Developing 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.

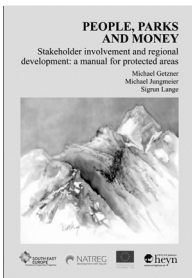
Several generations of graduates are still active in the Alumni network maintaining a platform for a long-term international exchange of protected area professionals.

## INFORMATION ON THE SERIES

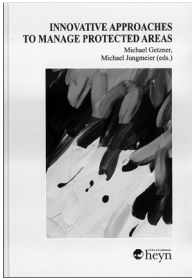
The Series „Proceedings in the Management of Protected Areas“ has been established in the framework of the Klagenfurt MPA Programme in order to disseminate the findings of the scientific studies of the participating students, and the results of related research projects on protected areas management. So far, the following titles have been published already:



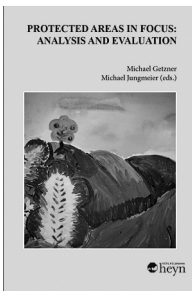
Volume I (2009): *Improving Protected Areas*. The first volume compiles the results of the theses written during the first MSc Programme from 2005 until 2007. The topics are ranging for biodiversity conservation, visitor management, and legal frameworks to management effectiveness, and environmental economics.



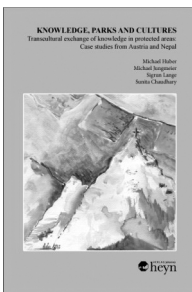
Volume II (2010): *People, Parks and Money. Stakeholder involvement and regional development: a manual for protected areas*. The second volume emphasises regional development and stakeholder involvement along the “life-cycle” of protected areas. It represents the European perspective of managing protected areas and was produced as training material for partners of the NATREG project, financed by the South East Europe Transnational Cooperation Programme.



Volume III (2012): *Innovative Approaches to Manage Protected Areas*. The third volume compiles the main findings of the theses written by the students during the MSc Programme from 2007 until 2009. Topics are ranging from management planning, and economic evaluation, to transboundary cooperation and branding.



Volume IV (2013): *Protected Areas in Focus: Analysis and Evaluation*. The fourth volume compiles the results of the theses written during the MSc Programme from 2009 until 2011. In preparation.



Volume V (2013): *Knowledge, Parks and Cultures. Transcultural exchange of knowledge in protected areas: Case studies from Austria and Nepal*. The fourth volume presents the results of the research project on knowledge exchange between protected areas in different cultures such as the European and the Asian culture.

The present results of the discussion on the future outlines of protected areas are published as the sixth volume of the series. Hard copies of all publications can be obtained from the Johannes Heyn Publishing House (<http://www.verlagheyne.at/buch>, please enter the keyword “protected areas” in the search engine). Pdf versions are available at the web page of the MPA Programme: <http://mpa.e-c-o.at/proceedings.html>.