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B R A E C H S W F T A C H W O N D A F L M I N K U Q D G H L Ö Q Ä U W E F M
S L E R A F S R X R W R G H A T S E I G A A K L E R Z U T R S E R H S W O I

E.C.O.
YEARBOOK Issue II / November 2014
Nature Conservation in the 21st Century

R Q U I E T Z S C H E L W R V Y E Q S A M I L O W E F Ä P Ü Ä M B N A W F F
Y Q R V E K L A M B E V E Q U M R W A N E F A T I Ö P Y L L I C H O M A T M
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N M E F A F Y W E S C H O U W T Z E N F L O U Y N S N M W Q U T Z Ö K E R A

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Preface



It was “not without a sense of pride” that we distributed copies of our yearbook on the 3rd of July last year. We enjoyed the preparatory work; we were very pleased with the result. Nevertheless, we were surprised at the very positive and enthusiastic feedback we received. There was mention of an “impressive performance”, of a “fascinating project diversity”, and of a “most accomplished presentation”. Thank you for your comments; they have confirmed to us that we are moving along the right path.



We would like to continue to contribute to the shaping of nature conservation in the 21st century. Some of the steps along the way are presented in this year’s yearbook. In the context of a large-scale research project these steps include the effort to trace the history of nature conservation in the German-speaking sphere, and the endeavour to sketch out Parks 3.0 – the protected areas of the future – together with a panel of experts (page 21). E.C.O. stands for continuous innovation in terms of technology and content, as we are able to demonstrate from page 12 onwards. We place particular value on strong collaborative relationships with the many participants in our projects, whether we are supporting the international effort to designate the “European Beech Forests World Heritage Site” (page 20), designing a novel exhibition stand for the Austrian National Parks (page 32), or developing new problem-solving approaches in relation to the sensitive subject Natura 2000 (page 19).

Increasingly, E.C.O. is active internationally. To name just one example here, we are privileged to be able to support the design of the largest protected area on Earth in the Okowango-Sambesi river system, which allows us to significantly expand our scope of action and our horizon in Africa.

Although there is much more news to report, our promise remains unchanged. It is important to us ...

- ... to be a reliable and trustworthy partner for our clients
- ... to build bridges between cultures, opinions, disciplines and interests
- ... to apply our expert knowledge in a responsible and independent manner
- ... to combine professionalism and enthusiasm in our work
- ... to integrate innovative approaches, methods and technology in our efforts

With this in mind, we would like to thank our clients, project partners and friends for the excellent cooperation. With best wishes,

Hanns Kirchmeir & Michael Jungmeier



Nature conservation in the 21st century

In conversation with Dr. Mario Broggi

Michael Jungmeier: Mario, your trailblazing work in terms of thinking about nature conservation is widely recognised. For example, you received the King Albert Mountain Award in recognition of your global achievements in the sustainable development of mountainous areas. Just recently, you were awarded the Euro Nature Prize, honouring you – quite literally – as the “pioneer of the European Beech Forest Movement”. What do these kinds of distinctions mean to you?

Mario Broggi: It is an ambivalent feeling. It seems quite likely that part of it is simply a sign of age – 45 years of accumulated professional experience represent a long time, and things did get done during that period. On the other hand, it does give me pleasure – after all, working to keep nature intact often involves blows and setbacks. Now it is my turn to experience the feelings I have been “inflicting” on Binding Award winners for almost 30 years as a member of the board.

In nature conservation, which are the areas that need both careful reflection and forward thinking, and why?

Nature conservation represents the public interest. It has to be borne by humility and ethics for the preservation of the genesis. This is confronted by numerous individual interests, which are powerfully and continuously progressed. In day-to-day life, the sum total of all these particular interests is threatening to turn into the public interest. Opposing such powerful currents requires persistence and backbone. The interests of nature conservation must regard themselves as a social force; one



that stands up for mankind's hopes for nature, and helps to shape the processes. This calls for the search for allies and for a convincing, appropriately argued conduct. The "nature conservationist" of today needs psychological training, above all; he or she must be able to galvanize civil society. A truly Herculean task!



You are regarded as one of the great proponents of the wilderness discussion in Europe. There is very little space on our continent – both in spatial and in cultural terms – for unspoiled nature. How do you explain the fascination of the "wilderness", and what do you see as the key challenges in wilderness protection?



For me, wilderness is space, which we consciously choose not to utilize or shape, where natural processes can run their course, without humans thinking and steering, where the unplanned and the unforeseen can unfold. In other words, wilderness means non-intervention. That is a difficult concept for man to grasp – he was and still is a colonizer. Nature protection so far has also often tried to control and to regulate. As a result, wilderness often remains merely as a "waste product", where man and his utilization of the land have retreated, and no other claims have been made. I, on the other hand, wish to make a case for an increase in biophilia, where wilderness is deliberately granted space, just as is the case for the idyllic notion of "home". Wilderness is not the opposite of the cultural landscape, it is an extension thereof, and as such it becomes a cultural responsibility. Wilderness and the cultural landscape should not be played off one against the other. In Central Europe, we must strive to allow the history of nature and of mankind to develop alongside of and in cooperation with each other. We have not reached that point yet. For now, the motto still tends to be "let us subjugate the Earth". To "let nature be nature" demands a lot from us: for example to feel respect and awe for nature. This is where I perceive the justification for wilderness. I propose a negotiation process that takes place locally. This debate must simultaneously consider natural-dynamic processes, the aspects of the cultural landscape, and sustainable land utilization in a micro region. In the context of regional development, areas can be designated as "target wilderness". Certainly, this requires that the rural space must be recognised by the "city" as complementary space with a delivered performance, and this recognition must be properly expressed.

In our panel discussion about the protected areas of the future "Park 3.0 – Protected Areas for a Next Society" you state that – with reference to nature conservation – there is not enough discussion taking place about which nature we actually want to conserve. What needs to be done to extend this core debate beyond the circle of experts and out into the broader public arena?

It seems to me that hobbies often set the tone in the past. We frequently oriented nature conservation objectives along these lines. However, not all kinds of plants and animals are umbrella species, which ensure the conservation of other species. I believe that any argumentation that only follows the line of nature conservation is simply not enough. Biodiversity must not be restricted merely to the conservation of species. The landscape itself is often neglected in considerations of this kind. Who will stand up for the "whole show"? In this respect, I would like to see dialogue taking place with the local regional civil society. It should receive the opportunity to state which landscape it wants to reside and live in.

What is your forecast for what nature conservation will be like in the middle of the 21st century; which issues, technologies and questions will it have to grapple with?

In his latest book, "The terrible children of the new age", Peter Sloterdijk wrote: "The present time is exhausted, because the feeling of being driven has replaced meaningful action." We have clearly



over-tightened the screw; a massive repair project lies ahead of us, to make up for the errors of the last two human generations. Those who worked towards keeping our shared world as intact as possible initially persisted as outsiders. Today, many have become institutionalised within the system, but remain atomized in the causes they support. I frequently feel like a blend of Michael Kohlhaas, who is often right, and Sancho Panza, in tilting against the windmills. And yet: every day, we get up and we carry on. This also casts some doubt on our efforts so far in the area of nature conservation, and I deliberately include myself in this criticism. We need to break out of our narrow, sectorial corset, and expand into the broad cultural and social aspects of our subject. Placing emphasis on quality of life while simultaneously increasing the deceleration will play an important part here. We have to question the traditional mantra of growth. When conducting these fundamental life discussions, we must not limit ourselves to natural values and ecological factors, and we have to pursue much broader strategies. I was recently very impressed by the following statement made by the curator of a museum of art, who said: "Instead of printing signs that state that »Touching the artwork is prohibited«, why don't we suggest that people »Take a step back to view the artwork«". Of course, this is an example of linguistic semantics, but it does make one think about how we have appeared to date.

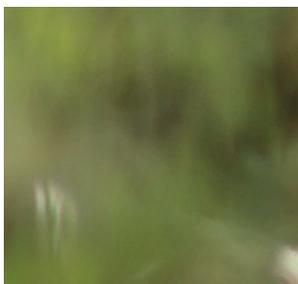
The closing question is of a personal nature, and concerns your immediate future. You are active in very many areas of nature conservation. What are your next plans?

At the age of 60 I stepped away from the daily job that involved a lot of bureaucracy and now I mostly do what I enjoy and what moves me. I see myself as an old-school private scholar, an occupation that was practised for many centuries, and I endeavour to think ahead, to think back and to think against the current – which requires peace and quiet, after all. I have arranged the required framework conditions to suit my needs. I do my operational work on the northern flanks of the Alps in Liechtenstein, while I find the shores of Lake Maggiore more conducive to innovative thinking with a strategic-conceptual orientation. Life as a „wild old man“, freed of all practical constraints is very appealing. What emerges is a kind of old-age radicalism, which is twinned with old-age wisdom and a certain restraint, which means that one no longer runs headfirst into every concrete wall. Currently, I occupy my time with issues such as the environmentally sound utilisation of land, the future of large-scale protected areas with their complex set of challenges, and the implementation of the notion of wilderness. I continue to visit primeval forests. Ancient, striking trees hold a great fascination for me. One is inclined to name each one personally. There is no lack of appropriate guiding examples for my future work, when I think of the old Bavarian master of open land ecology, Wolfgang Haber, or the human ecologist Dieter Steiner from Zurich, who continue to contribute to the debate in their distinctive and brilliant manner, well into their old age.

Mario, thank you very much for talking to us.



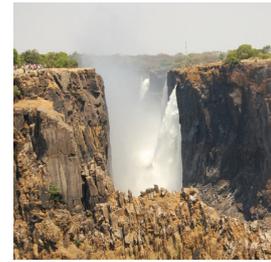
E.C.O. Institute of Ecology
Nature conservation in the 21st century



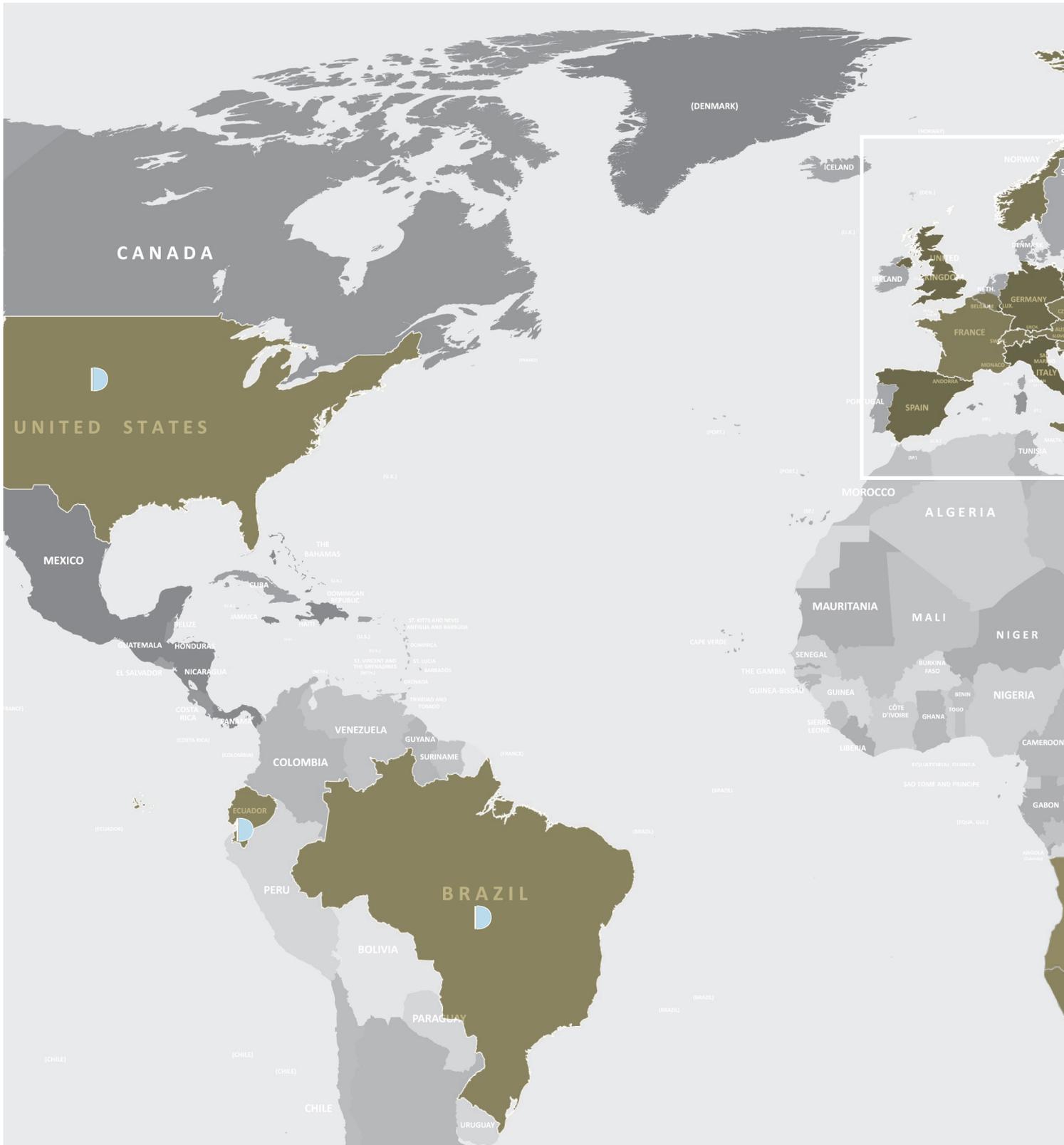
Where we work ...

Carpathian Biosphere Reserve (UA) Danube Delta Biosphere Reserve (RO) Dolni Morava Biosphere Reserve (CZ) Eastern Carpathian Biosphere Reserve (UA) Kafa Biosphere Reserve (ET) Prespa Biosphere Reserve (AL, MK, GR) Biosphere Reserve Salzburger Lungau & Kärntner Nockberge (AT) Biosphere Reserve Schorfheide Chorin (DE) Shikahogh Biosphere Reserve (AM, i.pl.) Val Müstair Biosphere Reserve (CH) Wiener Wald Biosphere Reserve (AT) Zakatala Biosphere Reserve (AZ, i.pl.) Anapurna Conservation Area (NP) Geopark Eisenwurzen (AT) Geopark Karawanken (AT) Natura 2000 Site Vorarlberg (AT) National Forest Monument Tumpf (AT) National Forest Monument Warmbad (AT) Aggtelek National Park (HU) Alatish National Park (ET, mpa) Arusha National Park (TZ, mpa) Berchtesgaden National Park (DE) Bialowieza National Park (BY, PL, mpa) Chitwan National Park (NP) Derdap National Park (SR) Dinder National Park (SD, mpa) Donau Auen National Park (AT) Duna-Drava National Park (HU) Dunapoly National Park (HU) Gauja National Park (LV, mpa) Gesäuse National Park (AT) Hirkan National Park (AZ) Hohe Tauern National Park (AT) Jostedalreen National Park (NO) Kopedagh National Park (TM, i.pl.) Lovcen National Park (MN) Mgahinga National Park (UG, mpa) Prespa National Park (AL) Risnjak National Park (HR) Sangay National Park (EC, mpa) Suisse National Park (CH) Serengeti National Park (TZ, mpa) Sevan National Park (AM, mpa) Simien Mountains National Park (ET) Nature parks in Styria (AT) Sumava National Park (CZ) Tatra National Park (SK, mpa) Velka Fatra National Park (SK, mpa) National Parks Austria (AT) National Parks Slovakia (SK, mpa) Natura 2000 Site Btorliget (HU, mpa) Natura 2000 Site Carei Plain (RO, mpa) Natura 2000 Site Deutschlandberger Klause (AT) Natura 2000 Sites in Malta (MT, mpa) Natura 2000 Site Lendspitz-Maiernigg (AT) Natura 2000 Site Maltsch (AT) Natura 2000 Site Schütt-Dobratsch (AT) Natura 2000 Site Stappitzer See (AT) Natura 2000 Site Steinfeld (AT) Natura 2000 Site Trögener Klamm (AT) Natura 2000 Site Val d'Alba (IT) Natura 2000 Site Vellacher Kotschna

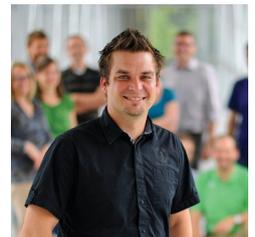
(AT) Natura 2000 Site Verwall (AT) Natura 2000 Sites in Carpathians (mpa) Nature Monuments in Carinthia (AT) Nature Monuments in Austria (AT; mpa) Alpenpark Karwendel (AT) Dobratsch Nature Park (AT) Eisenwurzen Nature Park (AT) Kopacki Rit Nature Park (HR) Lonsjko Polje Nature Park (HR) Mures Floodplain Nature Park (RO, mpa) Persina Nature Park (BG) Pöllauer Tal Nature Park (AT) Strandja Nature Park (BG) Nature Park Weissbach (AT) Nature Parks Austria (AT) Nature Reserve Finkensteiner Moor (AT) Nature Reserve Gorgany (UA, mpa) Parks in Switzerland (CH, mpa) Protected Areas in Kenya (KE, mpa) Parks of Sabah, Borneo (MY) Protected Areas in Serbia (SR, mpa) Protected Areas in the Alps (AT, FR, IT, CH, SI) Natura 2000 Sites Styria (AT) Protected Areas in Ukraine (UA, mpa) Protected Landscape Area Dunajske luhy (SK) Ramsar Site Hörfeldmoor (AT) Natura 2000 Sites Carinthia (AT) Ramsar Site Sablatnigmoor (AT) Ramsar Sites Austria (AT) Regional Park Colli Euganei (IT) Regional Park Kozjansko (SI) Kalkalpen National Park (AT) Special Nature Reserve Gornje Podunavlje (SR) **For many years, we have been working in the most beautiful landscapes in the world.** Tribal Buffer Zone Mission Mountains (US, mpa) Wetland of International Importance Mabamba Bay (UG, mpa) Wilderness Area Dürrnstein (AT) Sundarbans World Heritage Site & Ramsar Site (BG, mpa) European Beech Forests World Heritage Site (EU, CEE) Ukhahlamba Drakensberg World Heritage Site (ZA, mpa) KAZA Parks (AO, BW, NA, ZM, ZW)



Where we work ...



Who we are ...



Dr. Michael Jungmeier:
managing director,
ecologist, and human
geographer

Dr. Hanns Kirchmeir:
managing director,
vegetation ecologist,
and IT expert

DI Daniel Zollner:
project manager,
town and country
planner, and active
farmer

Caroline Stuchetz:
office management
and qualified
tourism manager

**DI Christina
Pichler-Koban:**
project manager, town
& country planner,
with a focus on nature
& society

**Mag. Elisabeth
Kreimer MSc:**
project manager,
human geographer,
graphic artist, and
communications
expert

DI Tobias Köstl MSc:
project manager, GIS,
vegetation ecologist,
with a focus on alpine
farming

DI Michael Huber:
project manager, town
& country planner,
with a focus on inter-
national protected
areas

Corinna Hecke MSc:
innovation assistant,
biologist, and drone
pilot

DI Anna Kovarovics:
project manager,
town & country plan-
ner, with a focus on
thematic trails

Alfred Müller:
IT technician specia-
lising in open source
solutions

**DI Susanne Glatz-
Jorde MSc:**
project manager;
town, country and
object planner with
experience of wor-
king in Africa



Thinking back – thinking ahead Innovation in conservation



Innovation in conservation – a much neglected area, and yet it is impressive to see, what kinds of innovations have emerged from nature conservation in recent years and decades. The notion that nature's resources cannot be gratuitously used and over-used has produced a vast number of instruments, organisations, solutions, and technologies. E.C.O. intends to contribute to this development.



Development as responsibility – E.C.O.'s innovation assistant

How can innovation succeed, how can innovation be understood and implemented as a continuous process in an organisation, which framework conditions do innovations need? Earlier this year, Corinna Hecke joined E.C.O. as innovation assistant, and she deals with these questions. Corinna is a participant in the Innovation Assistant Programme launched by the Carinthian Economic Promotion Fund (KWF). With the help of this programme, graduates from universities and universities of applied sciences can establish a foothold in small and medium-sized businesses in Carinthia. Innovation assistants attend an accompanying training programme, which supports them in their work. The topics range from innovation and project management via moderation and marketing to conflict resolution. Opportunities to swap experiences are provided within the scope of the Carinthian "Innovation Network".

E.C.O.pteryx – the nature conservation drone

Archaeopteryx, the first bird, was a rather ponderous creature that conquered the air space around 150 million years ago. As we know, wings and feathers proved to be a powerful innovation in evolutionary terms.

E.C.O.pteryx, E.C.O.'s drone, is also a prototype. The drone was specially constructed and configured to suit E.C.O.'s needs. The hexacopter demonstrated a convincing performance in early flight trials. E.C.O.pteryx is manoeuvrable, fast, and accurate in flight. The inner workings of the drone combine technological components from aerospace engineering, satellite-assisted guidance, geo-information, and camera technology. All relevant components have been designed according to the redundancy concept. The drone flies with little noise and produces no emissions.

From the air, E.C.O.pteryx provides a completely new view of biotopes, habitat structures, forms of vegetation, and landscape patterns. It is possible, for example, to gain a far higher quality identification of hummock structures in sedge swamps, of overgrown trenches, or fallow land habitats. The potential areas of use for the technology are correspondingly wide-ranging. In the future, E.C.O.pteryx will be on duty wherever we need high-resolution geo-referenced documentation of terrain. At this time, some additional technological developments are being carried out, and the necessary approvals must be obtained.

map&go – fully digital terrain mapping

Field surveying is hard work. Mappers are loaded down with maps, aerial and satellite images, data sheets, classification books, mapping instructions and guides, compass, altimeters and inclinometers, and of course: the obligatory camera. Over the course of several years we have successfully integrated all necessary documents and instruments in a single platform. The tablet PC now offers a single bundle comprising mobile GIS, the entire set of forms and data sheets, a camera, and various instruments. As long as there is sufficient battery life, and the weather plays along, our map&go provides considerable assistance to mappers. This allows the experts to focus more closely on the species, habitats, and the shape and utilisation of the landscape due to be surveyed.



Environmental education – the certification of thematic trails

Thematic trails, teaching or learning trails, adventure trails – many different names, which usually describe the same thing: Trails equipped with information, in order to convey a certain topic. They provide new experiences and adventures that are enjoyable, and are not quickly forgotten.

In order to identify the genuinely best thematic trails, and to introduce these to visitors, E.C.O. has developed a catalogue of criteria, allowing users to identify creative and innovative trails. Three main categories, each consisting of three subcategories, ensure that the quality of the content, the design, and the maintenance are safeguarded. Overall, the thematic trails are assessed, evaluated and certified on the basis of more than 100 different criteria. In this way, we can be certain, that the very best thematic trails stand out from the rest, and can be awarded the official seal of “thematic trail of the year”. This seal of quality is widely recognised; the trails are advertised online (<http://aut.themenwege.e-c-o.at/>), in an information brochure in the shape of a fan, in a guidebook, and in numerous news reports.

After the award ceremony in 2011 for Carinthia’s best thematic trails, the distinctions for the 33 best thematic trails in Austrian protected areas were awarded on the 2nd of May 2014 in Kals at the foot of the Großglockner. The awards were presented by federal minister Andrä Rupprechter, who handed the proud winners running the thematic trails a certificate from the Federal Ministry of Agriculture, Forestry, Environment and Water Management, as well as a badge with the seal of quality „Thematic Trail of the Year 2014“.



How we work ...



Namibia, Training of H
November 2013



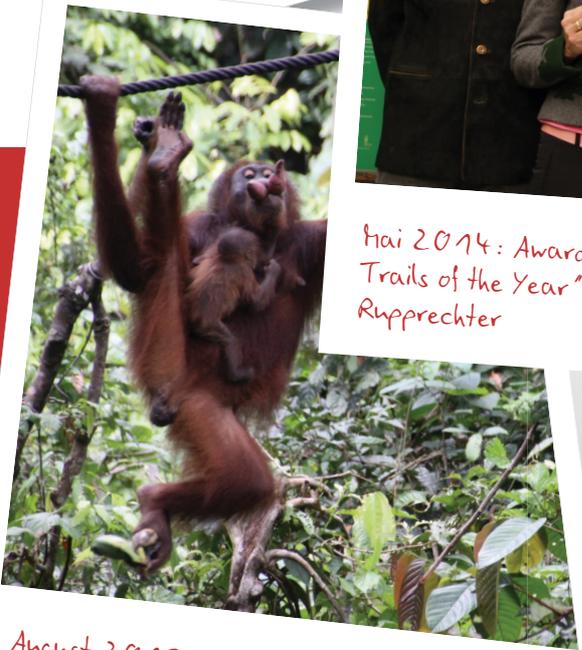
Danube Parks Workshop, 2013



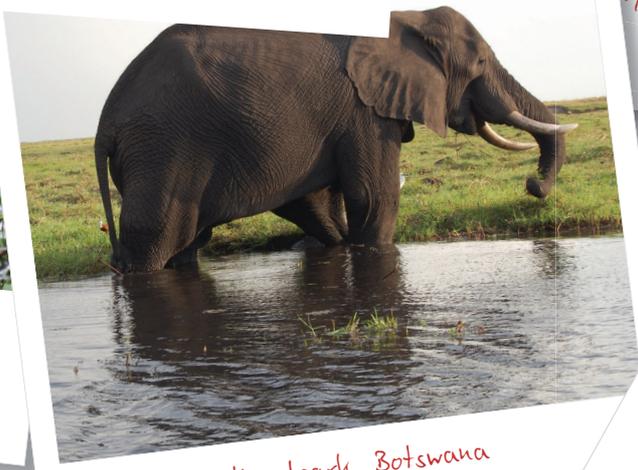
Mai 2014: Award ceremony "Thematic Trails of the Year" with Minister DI Andrä Rupprechter



14 mapping biot



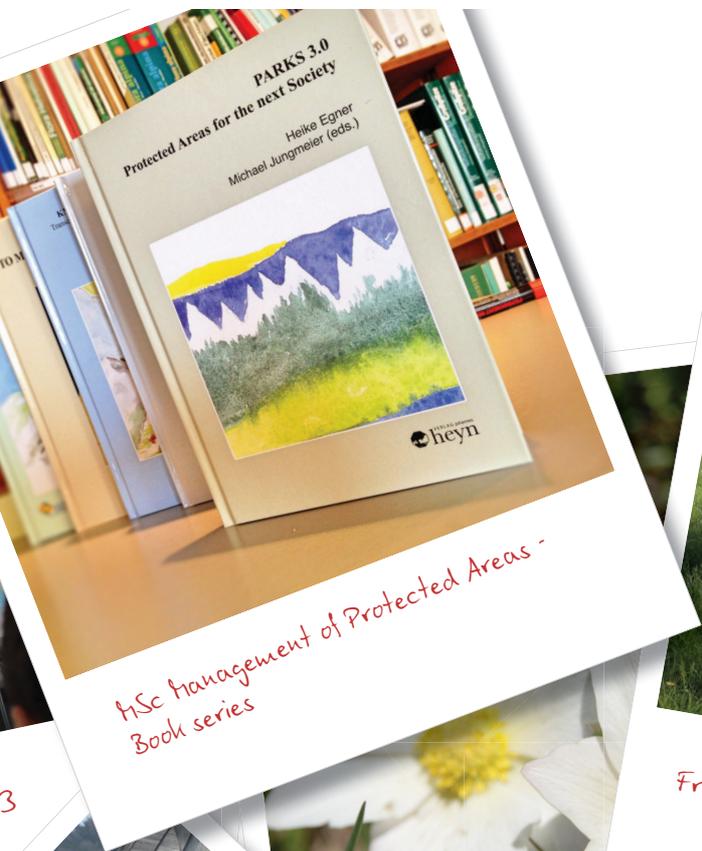
August 2013: Visit to Sabah Parks, Borneo (Malaysien)



Chobe Nationalpark, Botswana Inception Visit 2013



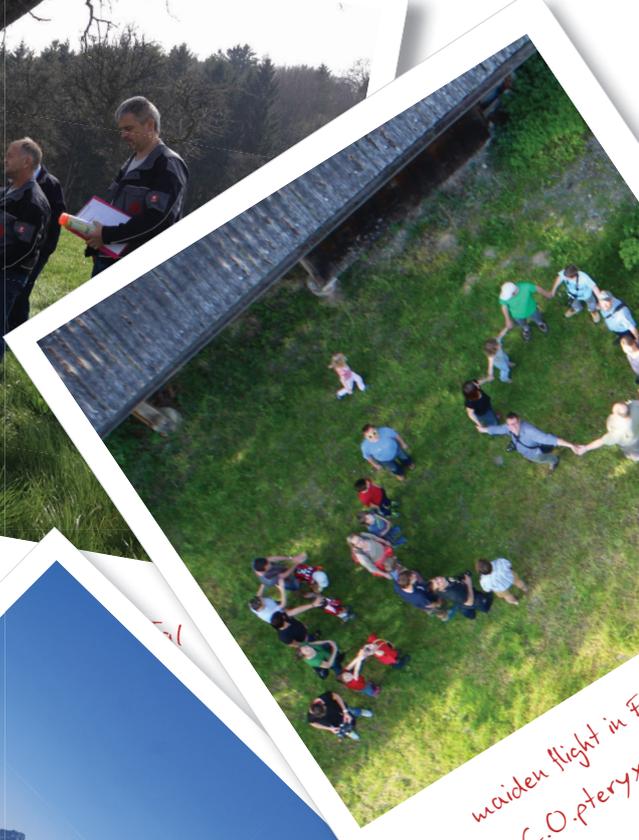
Themed islands in th.



MSc Management of Protected Areas - Book series



Fruit tree orchards in



Maiden Flight in F... E.C.O. pteryx



Großglockner, 2013



Geography course in the Biosphere Park



Quartic Trail: Pasterze Glacier



Natura 2000 Area Lendspitz-Haiernigg



Grand Opening Hirschbim Hirsch in park Pöllauer Tal, June 2014

What we offer ...

We offer **consultancy, planning, research and training** for protected areas and certified regions. In our work we support clients with the preservation and improvement of natural habitats, with the facilitation of exceptional experiences of nature, and with the development of living and economic conditions in the respective regions.

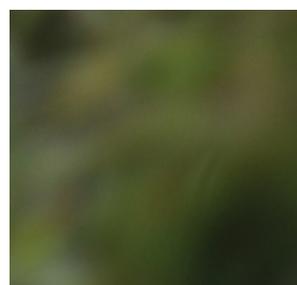
The exceptional quality of our service is achieved by bringing together ecological expertise, excellent communication, and effective project management (E.cology, C.ommunication and O.rganisation). We combine stringent expert concepts with technical implementation experience and professional design. Our particular strengths lie in the spheres of the integrated management of protected areas, vegetation ecology, nature conservation in forest areas, as well as ecological applications using GIS and IT.

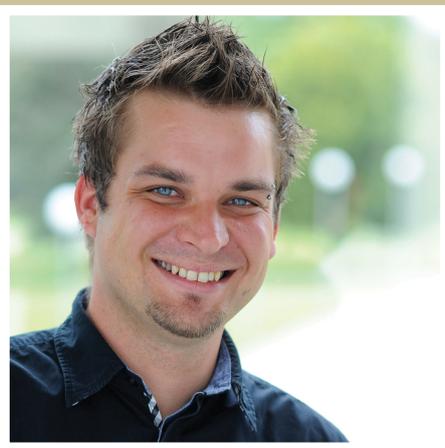
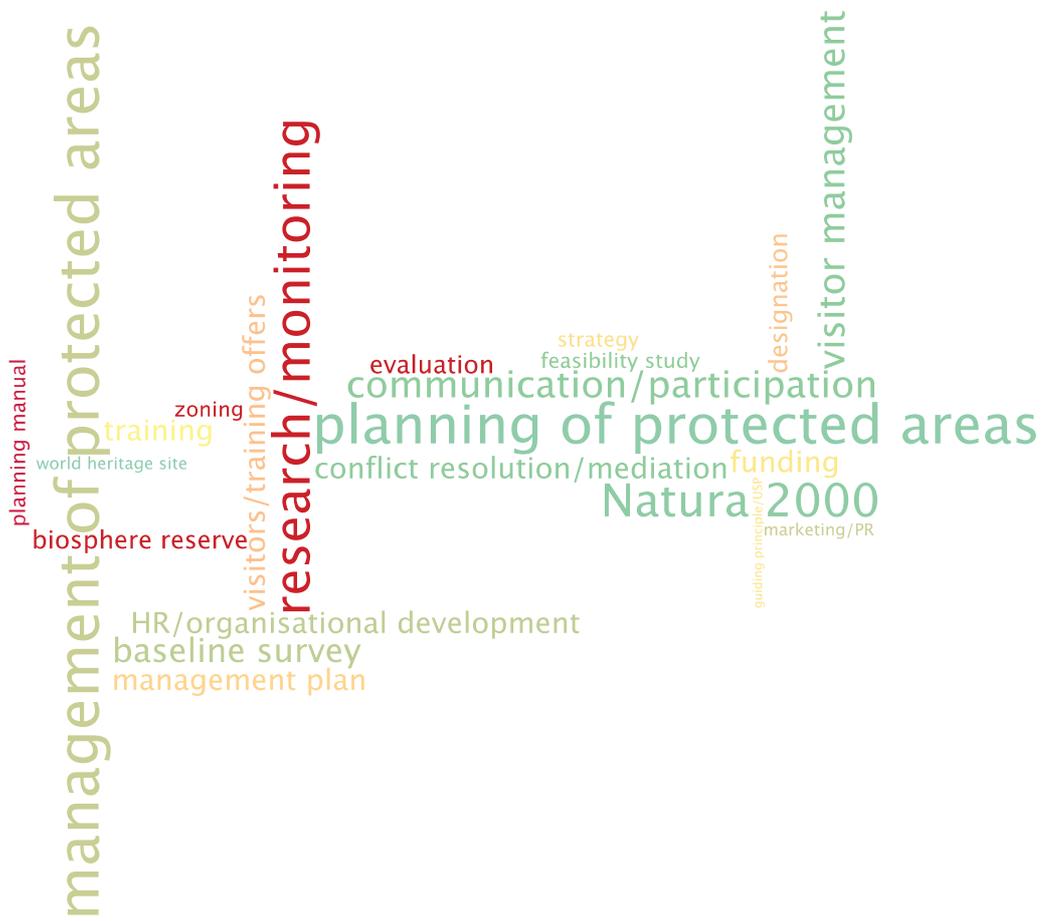
... what our clients gain

Federal Office for Nature Conservation	... commissioned a study on the expansion of the Beech Forests World Heritage Site	Nature Park Hoch- moor Schrems ...	... commissioned a visitors' information strategy
Federal Province of Salzburg ...	... commissioned mapping of biotopes	Austrian Academy of Sciences ...	... commissioned an integrated monitoring system for a cross-border biosphere reserve
Nature Park Pöllauer Tal ...	... commissioned themed visitor islands for the Hirschbirne pear variety	KfW Development Bank ...	... commissioned a training programme for rangers in Prespa National Park, Albania
Austrian Power Grid AG ...	... commissioned strategies for the sustainable ma- nagement of power lines	Peace Park Foundation ...	... commissioned a socio- economic survey on pro- tected areas in the south of the African continent



Division for the Management of Protected Areas





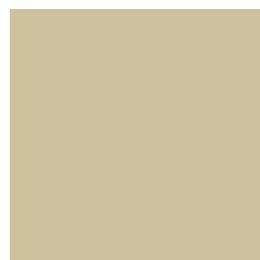
*Michael Huber
Head of the Division for the
Management of Protected Areas*

Be-Natur: Model project for the improved management of Natura 2000 sites

Initial situation: The loss of biological diversity represents one of the greatest challenges of our time. To conserve the natural heritage, some time ago, the European Union issued the Birds Directive (1979), which was subsequently followed by the (Flora Fauna) Habitats Directive (1992). Since that time, an extensive network of Natura 2000 sites has emerged in Europe. It serves to protect selected species living in their habitats in the wild and to ensure that these habitats exist within a pan-European network, in order to promote the natural propagation and recolonisation processes. However, progress with the implementation of these two EU directives has been very varied in the countries of Southeast Europe, and there are significant gaps in the management of Natura 2000 sites..

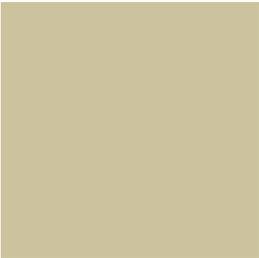
The Interreg project “Be-Natur” aims to improve the management of Natura 2000 sites. The Centre of Public Finance and Infrastructure at Vienna University of Technology was responsible for the coordination of work package 3 of the EU project, in which existing deficits were analysed and joint action plans, particularly for the management of wetlands, were developed. E.C.O. supported Vienna University of Technology with the technical implementation of the project. In a first step, an analysis of weaknesses was carried out with the aid of a

survey. Amongst other things, this revealed that frequently no management plans exist, and insufficient staff resources are available to maintain the Natura 2000 sites. In a next step, action plans were developed for the preservation of calcareous fens with *Cladium mariscus* and other small sedge species of the vegetation unit „Caricion davallianae“. Finally, E.C.O. defined indicators for the monitoring of wetlands, which allow the long-term monitoring of the development of species composition in these valuable habitats.



Title:	Management and implementation of NATURA 2000 sites
Client:	Vienna University of Technology, Centre of Public Finance and Infrastructure
Territory:	Southeast Europe
Categories:	Natura 2000 sites
Led by:	Tobias Köstl

INFORMATION



Ur^{Wald}: Nomination concept for the European Beech Forests World Heritage Site

Initial situation: Without the intervention of mankind, beech forests would today cover vast parts of Central Europe. However, due to the land use stretching back over thousands of years, ancient beech forests have become rare. What remains – a most precious natural heritage – must be placed under protection as comprehensively as possible. As early as in 2007, UNESCO recognised the “Virgin Beech Forests of the Carpathian Mountains” in Slovakia and in the

Ukraine as World Nature Heritage site. In 2011 this area was expanded to include the “Ancient Beech Forests of Germany”. In the course of the World Heritage nomination process, the UNESCO committee recommended the initiation of a European screening process, for the identification of further potential areas of expansion. For this purpose, the German Federal Office for Nature Protection (BfN) established a project during the period from 2012 to 2014, with the task of implementing the international screening process.

A team of experts associated with the “Centre for Ecnics and Ecosystem Management” at the Eberswalde University for Sustainable Development (HNE), which also included E.C.O., organised six international meetings in Bonn and Vilm (Germany), Monte Cimino (Italy), Rakhiv (Ukraine), and Vienna (Austria) in order to create an overview of the last remaining virgin beech forests in Europe, and to select suitable areas of expansion, which meet the stringent criteria of a UNESCO World Heritage designation. For example, the beech forests must cover an area of at least 100 hectare, have to be strictly protected, and must be under functional management. Furthermore, the forests should not have been used by mankind during the past 200 years. Initially, 37 areas in total in 20 European countries were identified. However, during the final meeting of the experts in Vienna in early April 2014, 44 areas were included in the so-called “Vienna strong list”, and were consequently recommended for submission to the UNESCO World Heritage committee in Paris. The two Austrian candidates, the Kalkalpen (Limestone Alps) National Park und the Wilderness Area Duernnstein, were also taken into consideration.

Title:	R&D Project “European Beech Forests World Heritage Site”
Client:	German Federal Office for Nature Protection
Territory:	20 European states
Categories:	UNESCO World Nature Heritage Sites
Cooperation:	Eberswalde University for Sustainable Development
Led by:	Hanns Kirchmeir

INFORMATION

Parks yesterday – today – tomorrow: Nature conservation concepts through the ages

Initial situation: During the past 150 years, nature conservation has become established as a significant element in the values and activities of modern societies, and has entered into politics, international programmes, and institutions across Europe. Initially conceived to preserve natural resources, nature conservation today represents an intricate set of responsibilities at the intersection of a variety of specialist disciplines. This complexity is particularly apparent in the sphere of protected areas. The analysis of protected areas in their social and cultural context reveals an unexpected view of the ideological conglomerate behind the modern understanding of protected areas

This study aims to identify the concepts, which underpin the designation of protected areas in the German-speaking world. The underlying data was drawn from the history of the protected areas National Park Berchtesgarden, Biosphere Reserve Schorfheide-Chorin, National Park Hohe Tauern, National Park Donau-Auen, Nature Park Dobratsch, Parc Adula and the Swiss National Park, as reflected in the contemporary media, and from the perspective of contemporary witnesses. The original material was examined using a qualitative text analysis process. The initial result took the shape of a code list, which was comprised of all identified agents, challenges, objectives, and instruments of nature protection. A scientific publication describes these, embedded within the history of the areas examined, and compares the develop-

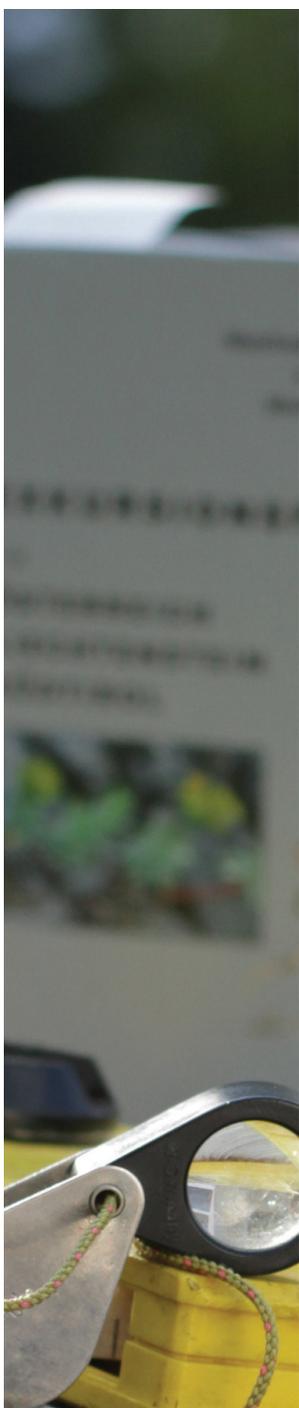
ments in the individual protected areas and in the three countries Germany, Austria and Switzerland. This endeavour intends to help agents working in nature conservation to understand their own role in the current sphere of nature protection, to critically examine the current strategies in nature conservation, and – if required – to rethink these. In the best-case scenario, this should open up new opportunities of action.

During the course of this research project, E.C.O. initiated an expert discussion about the role and the challenges of the protected areas of the future, the “Parks 3.0”. 37 experts from 13 European countries commented on 23 hypotheses and sketched some fascinating future trends, such as the interest in areas of wilderness, or in learning spaces for a sustainable way of life. The results of this discussion were summarised in the publication “Parks 3.0 – Protected Areas for the Next Society”.



Title:	Society and Protected Areas in Transition
Funding:	Bristol Foundation
Territory:	Austria, Germany, Switzerland
Categories:	National parks, nature parks, biosphere reserves
Led by:	Christina Pichler-Koban

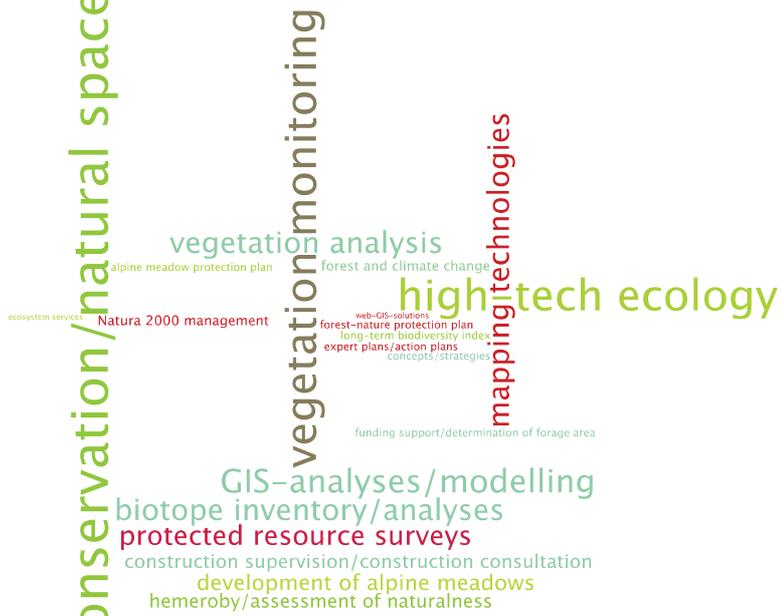
INFORMATION



Division for Nature Conservation and Natural Space Management



nature conservation/natural space management



*Hanns Kirchmeir
Head of the Division for Nature Conservation
and Natural Space Management*





Almen^{cauc}: Erosion and pasture management in the Caucasus Mountains

Initial situation: In the mountainous regions of the southern Caucasus, overgrazing of pastures and overuse of the mountain forests and elevated regions increasingly represent an existential threat to the sustainable productivity and biodiversity. Traditional pasture management systems that are comparable with the Alpine pasture management and its rules have been largely forgotten. Climate change is exacerbating the negative impact of the overuse and

degradation, and the threat to the productivity and the biodiversity in the southern Caucasus is noticeably increasing.

The importance of forests and intact alpine grasslands for the purpose of soil and erosion protection is clear, and yet no effective solutions have been found to date. For this reason, the focus of the international development effort in the southern Caucasus lies on this issue, and particularly on finding ways to involve the local population and communities.

Working under the leadership of Eco-Consulting Group and in collaboration with AHT Group and the international team leader in Georgia, E.C.O. will participate in this project until 2017, developing solutions for sustainable land use and erosion protection. E.C.O. contributes its extensive specialist knowledge, acquired in nu-

merous alpine pasture projects carried out in the Alps. A strategy for long-term sustainable use will be tested in three pilot regions, and will subsequently be adopted into the national regulations, in order to strengthen the sustainable development of the region. Working together with the local population and various regional partners, a series of measures such as local reforestation, bio-engineering erosion protection measures, the development of pasture management plans similar to the Austrian alpine pasture development plans, and the development of an incentive system for the local population in the pilot areas will be implemented.

E.C.O. is supporting this process with its many years of specialist expertise in the areas of vegetation monitoring, alpine pasture management, and environmental education. Within the scope of this large-scale project, E.C.O. not only shares responsibility for the technical concept and the realisation across three countries. With three project offices in Yerevan, Tiflis and Baku, E.C.O. will also support extensive implementation projects. In the years ahead, our experts expect to visit the southern Caucasus on a regular basis.

Title:	Integrated erosion protection in the southern Caucasus
Client:	GIZ, co-financed by the Development Agency ADA
Cooperation:	Eco Consulting Group, AHT Group
Territory:	Georgia, Armenia, Azerbaijan
Led by:	Michael Jungmeier; Hanns Kirchmeir

INFORMATION

MOBI-g: Global biodiversity monitoring in stone quarries

Initial situation: The quarrying of sands and gravels generally signifies a massive disruption of the affected habitats. Today, many companies are aware of their responsibility with regard to biodiversity. The company Holcim, for example, in cooperation with the International Union for Conservation of Nature (IUCN), has developed an ambitious and innovative biodiversity management system for its 560 quarries around the world. The company has defined its objective to avoid any net biodiversity loss. In order to achieve this, it was necessary to develop a system to monitor the areas before, during and after each intervention.

E.C.O. was commissioned to screen a variety of monitoring systems with regard to the suitability for Holcim's specific objective. In doing so, the team assumed that a natural habitat is primarily characterised by the composition of its plant life. The methods selected therefore aim towards the monitoring of plant communities and habitats. The study revealed that biodiversity in the quarries is most effectively monitored using remote sensing technology, as satellite images are available virtually everywhere with a stan-

standardised quality. Nevertheless, a global approach always requires a blend of various technologies. Remote sensing, for example, must be combined with samples taken in the field, in order to deliver reliable results. At the same time, the biodiversity in the quarry must be compared to the plant diversity in the surrounding landscape. Using the collected data, an index can be calculated that matches the "long-time biodiversity index" (LBI). The LBI was developed by E.C.O. and has been successfully deployed in the monitoring of Austrian quarries for around ten years.



Title:	Biodiversity monitoring scheme – technology screening
Client:	International Union for Conservation of Nature (IUCN)
Territory:	Stone quarries worldwide
Led by:	Hanns Kirchmeir

INFORMATION



Network Natural Forests: The biotope network of the Northern Limestone Alps

Initial situation: Given the predicted climate change in particular, the diversity of the species can only be preserved in the long term, if the natural exchange between animals and plants living in the wild can be guaranteed. In today's cultural landscape, this is often no longer the case. This is why the Limestone Alps National Park, together with the National Park Gesäuse, and the Wilderness Area Dürrenstein, has initiated the project "Network Natural Forests",

which reaches across the borders of the provinces. The aim is to link the habitats of the three protected areas, thus creating a habitat network, which allows the migration of the species and the genetic exchange of the populations. It is expected that opportunities for regional development will emerge, and an awareness of the regional treasures will develop.

E.C.O. was commissioned to identify areas that are particularly suitable for inclusion in a spatial network of habitats in the project area. In a first step, using GIS analyses, E.C.O. determined the areas, which have remained largely untouched by human use (e.g. low-level infrastructure in the form of forest tracks), and which would

therefore serve as stepping-stones for establishing the network. In a second step, experts selected three target species during a workshop (white-backed woodpecker, barbastelle bat and *Rosalia longicorn*), and coordinated the selection of the stepping-stones with their habitat needs. Taking into consideration the suitability of the natural space and the availability of the respective areas (ownership and/or protection status, magnitude of possible compensation payments in the case of utilisation), an east-west corridor was defined, which links all three protected areas to each other. The spatial analysis was process-oriented, which means that the type of habitat network as well as the applied methodology only emerged during the course of the process. The significant factor was the close cooperation with key regional persons and institutions. Still, the defined corridor will ultimately only serve its purpose, if the non-utilisation of the areas can be safeguarded through contractual nature conservation in the long term.

Title:	Spatial analysis: Nature conservation priority areas
Client:	Limestone Alps National Park
Territory:	Border triangle Upper Austria, Lower Austria and Styria
Categories:	National park and wilderness area
Led by:	Hanns Kirchmeir

INFORMATION

OKTM: Nature conservation along power lines

Initial situation: The Austrian Power Grid AG (APG) owns and operates the supra-regional high-voltage grid (110, 220 and 380 kV) in Austria, and in its role as independent transmission grid operator it is responsible for the operational management, maintenance, and planning of the network, as well as for the expansion. With its project “Sustainable transmission line management” APG sets a clear signal that it not only ensures the reliable supply for the population, but beyond that also takes responsibility for nature and environmental protection. In the construction of new transmission lines, the disruption caused to the landscape and the natural balance should be kept as low as possible. Furthermore, analyses will reveal the measures that can be employed to promote the biodiversity along existing lines.

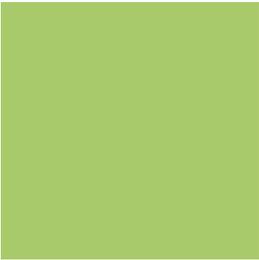
During the initial pilot phase of the project, E.C.O. was asked to survey the habitats of defined line sections, to assess these in terms of nature protection, and to suggest measures for maintenance and care. The pilot line chosen was

the 110 kV line (K2), which connects Sachsenburg and Oberdrauburg in the Upper Drau Valley, and measures approx. 40 km. During the inspection of the line E.C.O. documented the respective biotypes and the occurrence of nutrient indicators, neophytes and species of shrub. At each of the 142 pylon points, the most precious habitats in terms of nature conservation were documented and photographed. All data was entered into a database and represented spatially using GIS. Following analysis of the data, 34 measures were developed, which were fed into a short profile format.



Title:	Sustainable transmission line management Styria, Carinthia and East Tyrol
Client:	APG – Austrian Power Grid AG
Territory:	Styria, Carinthia, East Tyrol
Led by:	Hanns Kirchmeir

INFORMATION



Bio.top^{sbg}: Biotope mapping Salzburg

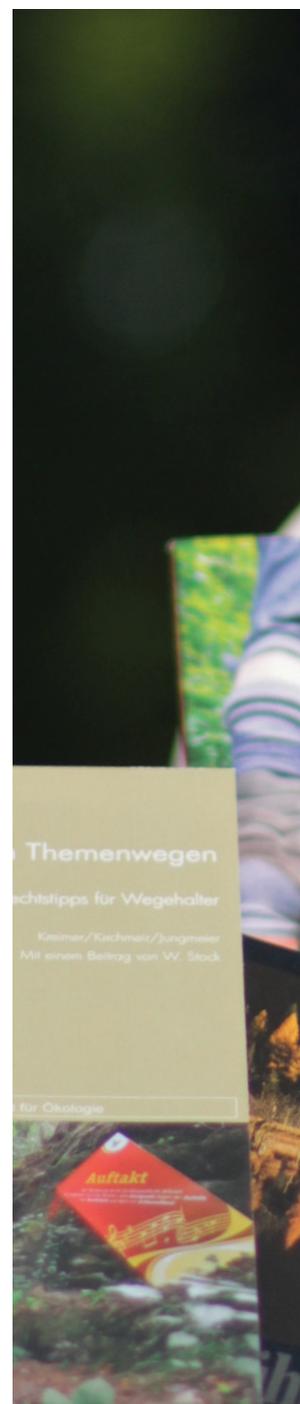
Initial situation: Accurate knowledge of the configuration of biotopes, particularly of their location, quantity and quality, is a fundamental prerequisite for the conservation of areas deserving nature protection. Biotope mapping is a central instrument for pro-active nature conservation. Biotope data must be collected, made available, and regularly updated. The federal province Salzburg has completed an initial comprehensive survey of biotopes, and has commenced the revision of the initial survey in line with a new guideline.

In the area of biotope mapping, E.C.O. can provide the development of technical standards and guidelines, as well as the analysis of the results. Of course, our team also participates in conducting the surveys. In this case, E.C.O. was commissioned to carry out biotope mapping in the Salzburg municipalities of Henndorf on Lake

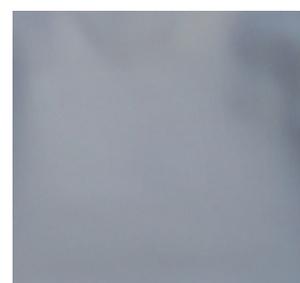
Wallersee and Berndorf. In accordance with the new guidelines published by the province of Salzburg, this endeavour included the extensive determination of FFH habitats. The survey involves the use of new technologies, integrating all essential mapping records (data banks, aerial images, camera, etc.) on the platform of a tablet PC (see also p. 13). More than 1,000 biotopes were documented during the survey. In total, 92 separate biotope types were identified, with the dominant ones being grove structures such as thickets, hedges, orchards, and single trees. In addition to the “actual” mapping, it is the constant job of the mapping team to provide landowners, locals and interested parties with relevant information about the work being carried out and about the biotopes.

Title:	Revision of biotope mapping in the federal province of Salzburg
Client:	Office of the provincial government of Salzburg
Territory:	Salzburg, Austria
Category:	Natura 2000
Led by:	Tobias Köstl

INFORMATION



Division for Environmental Education and Raising Awareness about Nature





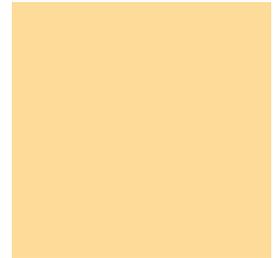
*Elisabeth Kreimer
Head of the Division for Environmental Education
and Raising Awareness about Nature*

info@birn: Themed visitor „islands“ in the Nature Park Pöllauer Tal

Initial situation: The Nature Park Pöllauer Tal with its six Nature Park municipalities is located at the heart of eastern Styria. The varied cultural landscape is characterised by forests, fields, orchard meadows, and rows of old fruit trees. One particular feature is the significant presence of the old Styrian pear fruit called the “Hirschbirne”, whose name can be traced back to the East Styrian word “Hiascht”, which means “autumn”. Having received very little attention for many years, today it is the leading product of the Nature Park that was given the name “Genusregion Pöllauer Hirschbirne” in 2006 in recognition. Due to the high demand for regional Hirschbirne products (such as juice, fine brandy, vinegar, or dried pears) and the successful network involving all agents, an exemplary marketing strategy has been developed for the region. A series of offers in and around the orchard meadows and the Hirschbirne aim at providing an enjoyable and relaxing experience for both locals and guests.

E.C.O. was commissioned to design a thematic trail based on the Hirschbirne. In a participatory process involving local agents, the decision was made to design several themed islands rather than one thematic trail. Each island is maintained by a different local responsible in charge (ambassador). In agreement with the client, the

information points are developed in such a way that they can be visited as stand-alone stations, but together with the other stations they fit into a coherent whole in terms of content and theme. The design of the stations took into account the needs (ease of use, emotional, interactive, informative) of the broadly defined target group. Consequently, each themed island includes an interactive element as well as an information area, and together the islands cover all significant topics relating to the Hirschbirne. The acoustic tree, the tree books, and the information panels – they all feature appealing designs, which were implemented in collaboration with regional businesses. Visitors should not only learn about important topics such as the orchard meadow, ingredients, processing, and regional value creation, but should also have the opportunity to meet local people – the ambassadors of the leading product Hirschbirne – in person. The formal opening ceremony for the themed islands took place at the end of June 2014.



Title:	Hirschbirn hirsch'n in Nature Park Pöllauer Tal
Client:	Tourism Association Nature Park Pöllauer Tal
Territory:	Styria, Austria
Category:	Nature park
Led by:	Elisabeth Kreimer

INFORMATION



NPA: Exhibition stand National Parks Austria

Initial situation: “National Parks Austria” is the association of the six Austrian national parks, with the objective of carrying out joint PR work. In addition to a new website, a redesigned logo, a series of events, a new magazine, and various other projects in the realm of publicity work, the creation of a shared mobile exhibition stand was agreed. The exhibition stand aims to present the six national parks under the umbrella brand of “National Parks Austria”. Depending on

the requirements of the specific event, it should be possible to enhance the basic elements of the stand by adding modular components, or to use it in a reduced form. As part of the overall PR package, the exhibition stand represents a precisely defined interface, reflecting each of the national parks in its visual design.

Within the scope of the project “National Parks Austria PR Work 2012-2014”, E.C.O. was commissioned to plan and design an exhibition stand to jointly present the six Austrian national parks at exhibitions and other events. The implementation included the representation of the diverse and vibrant habitats along with an interactive element.

A flexible photo exhibition illustrates the unique landscapes, animals and plants in each of the six parks. The interactive core of the exhibition stand is a so-called Photo Box. This includes a self-triggering photo module and six different background images from the individual national parks. Depending on their choice, visitors can take up position in front of the Großglockner, or at Darscho next to the Lake Neusiedl, for their personal photograph. Visitors receive a copy of their picture as a souvenir straight away, or they can access it on the website, and send it to friends. The exhibition stand was premiered to great acclaim at the Interpädagogica exhibition in Graz in mid-November 2013, and was used again in December 2013 during the annual conference of the National Parks Austria.

Title:	Exhibition stand National Parks Austria
Client:	National Parks Austria / Austrian Environmental Umbrella Organisation
Territory:	Austria
Category:	National parks
Led by:	Elisabeth Kreimer

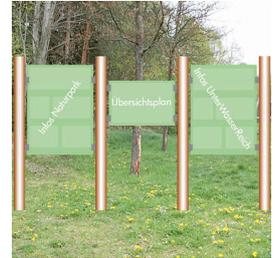
INFORMATION

BESI^{Relaunch}: Visitors' information in Nature Park Hochmoor Schrems

Initial situation: The Nature Park Hochmoor Schrems is located in the Waldviertel region of Lower Austria, and is part of the Ramsar site "Waldviertel Pond, Moor and River Landscape" which was designated in 1999. A vast variety of activities, such as a thematic trail, programmes for schools and children, and hiking trails leading through the nature park, attract many interested guests every year. In order to make visitors aware of the various offers, and to facilitate orientation in the park, a consistent information strategy is of the essence.

E.C.O. was commissioned to develop a visitors' information concept for the nature park. Particular attention was given to the area between the moor bath in Schrems and the sky ladder at the end of the "moor story trail". During the course of the project, this area was carefully inspected, documented, and captured in photographs. Subsequently, the collated data were analysed, and documents were prepared including recommendations and graphical illustrations. In a first step, E.C.O. produced

quality criteria for visitor information, which ensure that visitors can grasp the information quickly, and that useful content is transmitted. During the analysis stage, E.C.O. noted a range of existing visitor management measures. By contributing an external point of view, recommendations for the extension and improvement of the existing infrastructure were developed. The improvement of the trail guidance system and the further development of the information panels and local maps were particularly significant for the user-friendliness of the "UnterWasserReich" visitor center. Furthermore, new and additional locations for signposts and overview panels were defined, and recommendations were made in terms of their content and design. In terms of the external guidance system, clearly marking the visitors' centre was of special significance in the analysis and implementation phases.



Title:	Information concept for the Nature Park Hochmoor Schrems
Client:	UnterWasserReich – Naturpark Hochmoor Betriebs GmbH (Nature Park management company)
Territory:	Lower Austria
Category:	Nature park
Led by:	Anna Kovarovics

INFORMATION



FIMO^{Relaunch}: Adaptation of the visitor information facilities at Finkenstein Moor

Initial situation: The Finkenstein Moor is an important area of nature conservation, which serves as a habitat for a range of rare and protected plant and animal species. Stretching across almost 100 hectare, it follows the silted up shore areas of the Pressegger Lake and the Sablatnig Moor as one of the largest moors in Carinthia. A much loved and – especially during the summer months – much used hiking and cycle track leads right across the moor, passing

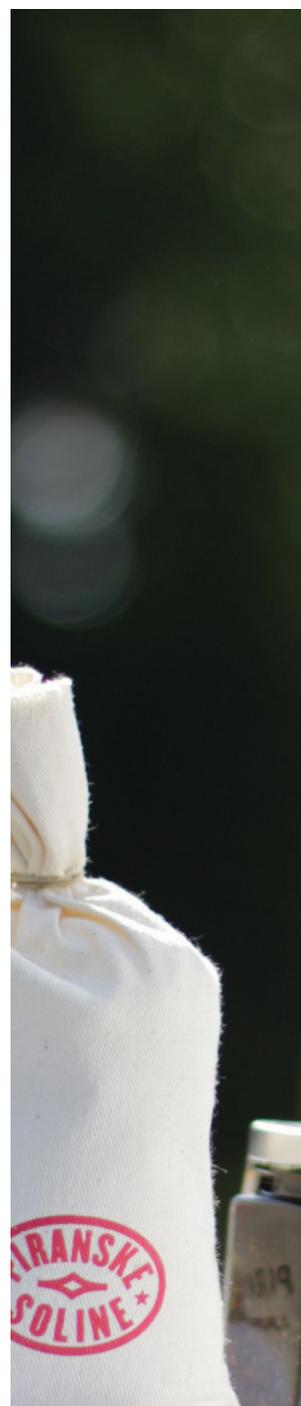
close to some very sensitive habitats. The moor is recognised for the high leisure and relaxation values it offers to guests and local visitors. That is why it is of particular importance to point the special features of the area out to the moor's visitors. An interesting thematic trail leads already across the moor, and shows important correlations, ecological factors, as well as unique animals and plants.

E.C.O. was tasked with designing a natural history installation for the Finkenstein Moor. Within the scope of the project "Certification of thematic trails in Carinthia", the existing thematic trail in the Finkenstein Moor was inspected and evaluated. In collaboration with the operator of the thematic trail and with the client,

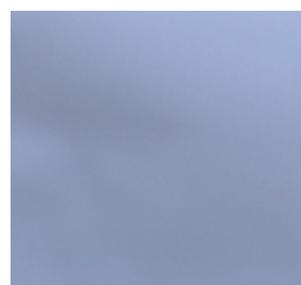
ideas for the possible adaptation were developed. These included equipping the trail with new information points, modernising it section by section, and generally "revitalizing" the trail. The aim was to establish an information point on the eastern edge of the moor, which would act as the starting point for the thematic trail, and would provide general and introductory information about the moor and its special features. As agreed with the client, as well as transferring knowledge, the interactivity of the information point was also a key issue. In the final realisation, an information panel, as well as a turntable element was constructed and installed, which playfully informs visitors about the genesis of the moor, and which is a particular favourite among children. The location was selected in such a way that the moor can be easily reached and thoroughly explored from this starting point.

Title:	Natural history installation at Finkenstein Moor
Funding:	Municipality of Finkenstein on Lake Faak
Territory:	Carinthia
Category:	Conservation area
Led by:	Elisabeth Kreimer

INFORMATION



Division for Sustainability and Regional Development





*Daniel Zollner
Head of the Division for Sustainability and
Regional Development*

BRIM^{lun-no}: Integrated monitoring for the Biosphere Reserve Lungau in Salzburg & Carinthian Nockberge

Initial situation: In 2012, UNESCO recognised the two regions of Lungau in Salzburg and the Carinthian Nockberge as joint cross-border biosphere reserve. Immediately after the nomination, E.C.O. developed a set of twelve indicators for the Carinthian part of the biosphere reserve in a pilot study, to measure the future success of the management in terms of ecological, economic and social development. On the Carinthian side, these indicators were coordinated with the most important regional decision-makers. In the interest of the agreed collaboration between the two regions, the monitoring concept should now be extended to cover the entire area of the biosphere reserve.

E.C.O. was tasked with extending the existing monitoring programme, and adapting it to the requirements in the Lungau region. In order to do this, the pilot system of BRIMNockberge and the management team of the Carinthian biosphere reserve were first tested in the practical setting with regard to the availability of data, ease of use of the data entry interface, and the meaningfulness of the selected indicators. A few of the indicators were improved; the database

proved to be perfectly suited for use in the practical setting. Subsequently, a series of workshops was held with the management team and with representatives from regional politics and society in the Lungau region. With the exception of the ecological indicators, the proposed indicators were largely accepted, with a few modifications and additions, and were confirmed by the decision-making body. This means that the implementation of the monitoring programme in the Lungau region can now commence.



Title:	Integrated monitoring for the Biosphere Reserve Lungau in Salzburg & Carinthian Nockberge
Funding:	Austrian Academy of Sciences
Territory:	Carinthia, Austria
Category:	Biosphere reserve
Led by:	Michael Huber

INFORMATION



KAZA: Socio-economic monitoring in the largest conservation area on Earth

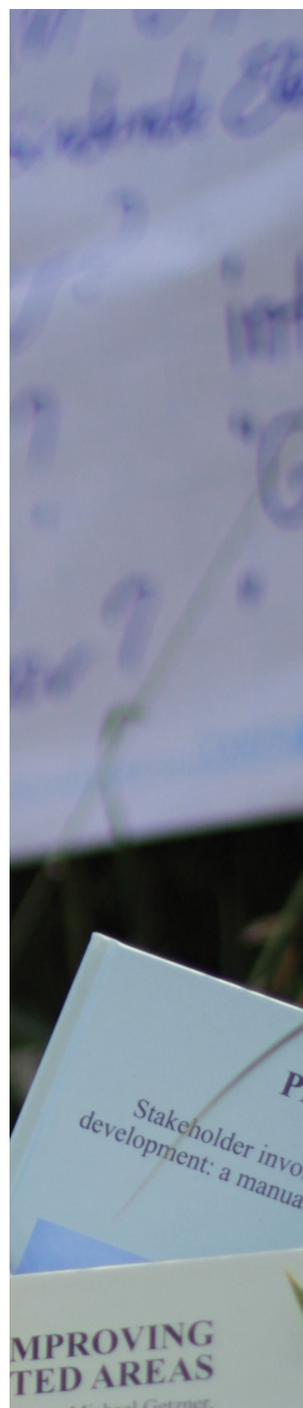
Initial situation: Following a long period of preparation, in 2012, the heads of state and government of the countries Angola, Botswana, Namibia, Zambia and Zimbabwe opened the Kavango-Zambezi Transfrontier Conservation Area (KAZA TFCA) in the area where the borders of the five countries meet the rivers Zambezi and Kavango. The trans-boundary “Peace Park” covers an area of 430,000 km², which makes it the largest terrestrial

protected area on Earth. The aim is to allow the free movement of elephants in their natural habitat, while also boosting development in the region with eco-tourism. The area is not only home to the largest elephant population in the world, but also to around 1.2 million people, living mostly in small villages. The high game density poses an existential threat to the population, which depends to a large extent on agriculture. However, without the support of the local population, nature conservation measures cannot be successful here. The aim with KAZA, therefore, is to improve the living conditions of the rural population by reducing wild animal conflicts, to promote eco-tourism, and to encourage the sustainable use of natural resources.

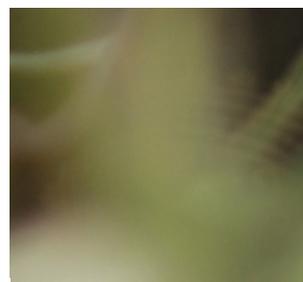
In order to be able to measure the long-term success of this objective, the status quo must be known. E.C.O. was therefore commissioned to carry out a socio-economic baseline study in all five KAZA partner countries in cooperation with Namibia University and a partner firm from Zambia. The survey of 1,500 households in the five participating countries revealed a detailed picture of the current living conditions of the local population (e.g. level of education, employment/financial status, social structures, etc.) and of their dependency on the natural resources. Qualitative interviews and group discussions (in workshops) highlighted the greatest challenges and threats, but also showed the opportunities for the respective regions. The results will serve as a basis for planning processes and target development in the future. Once the results had been analysed, E.C.O. developed socio-economic indicators and objectives for a regular monitoring of the rural development in the KAZA region. A “livelihood index” was created specifically to provide a simple key indicator for long-term observation. It will measure the impact of the respective projects and of the programme upon the households and rural communities in the long term.

Title:	Socio-economic baseline survey for the KAZA TFCA
Client:	Peace Parks Foundation, funded by the KfW Development Bank
Territory:	Angola, Botswana, Namibia, Zambia and Zimbabwe
Categories:	National parks and wildlife preserves
Led by:	Susanne Glatz-Jorde, Hanns Kirchmeir

INFORMATION



Division for Education and Training



education/training
 teaching/training plans
 knowledge management
 knowledge transfer
 training needs assessment
 capacity building
 MSc. Management of Protected Areas
 educational cooperation agreements
 workshop
 pre-scientific work
 seminar courses
 training programmes
 training plans
 research-educational cooperation
 university certificate programme-sustainability
 part-time learning for working individuals
 lecture courses



*Michael Jungmeier,
 Head of the Division for Education and Training*

PRESPA: Organisational development and training in Prespa National Park

Initial situation: The Prespa Lakes, with their abundance of fish, and the drainage basin in the border triangle between Macedonia, Albania and Greece are home to many rare animal and plant species. They are particularly significant as breeding and hibernation site for rare species of birds, such as the Rosy pelican and the Dalmatian pelican. In 1999, Prespa National Park was established on the Albanian shores of the Great and Small Prespa Lakes, covering an area of 27,730 hectare. Due to low precipitation and an increased extraction of water for agricultural purposes and for domestic use, the water levels of the two lakes have dropped dramatically in recent years – the ecosystem is at risk. We are currently working on the expansion of a trilateral biosphere reserve in the Prespa Region, in order to promote the trans-boundary collaboration of the three countries, while simultaneously preserving the habitats and encouraging the sustainable use of natural resources.

Within the scope of a cooperation project between Germany and Albania, E.C.O. was commissioned to develop training modules for the staff at Prespa National Park. In a first step, E.C.O. conducted an analysis of the training needs assessment, using a skills pyramid to determine the stock of knowledge of the individual members of staff. The skills available in

the team as a whole were then derived from the personal profiles, and were compared to the set of skills considered necessary for the management of a protected area. Once the areas of skills deficits had been defined by the analysis, these were used as a basis for the development of training modules, focusing on, amongst other things, management planning, tourism development, and first aid measures. During the period from 2010 to 2013 a total of 20 staff members took part in seven training modules. In addition, E.C.O. developed an organisational structure for the management of Prespa National Park, as well as job profiles for the key positions in the team.



Title:	Trans-boundary Biosphere Reserve Prespa – Support to Prespa National Park in Albania. Capacity Building & Training
Client:	ÖFB, Development Bank (KfW)
Territory:	Albania
Led by:	Michael Jungmeier

INFORMATION



MPA: MSc „Management of Protected Areas“

Initial situation: The most beautiful and most species-rich landscapes on Earth are placed under protection und sustainably developed in national, nature and biosphere parks. Today, the management of these areas is more difficult than ever before; the demands placed upon those responsible for the respective areas have risen sharply. They are expected to be not only thoroughly trained nature conservation experts, but also specialists in the areas of communication and

conflict resolution, regional development, as well as in project management and financial planning. Consequently, the International Nature Conservation Union IUCN is (not alone in) urgently demanding a professionalization of the management of protected areas. To date, many countries do not have a clear professional profile for managers of protected areas – and thus, there is also no in-depth vocational training.

In order to close this training gap, and to contribute to the professionalization of the management of protected areas, in 2005 E.C.O., in collaboration with the Alpen-Adria-Universität Klagenfurt, established the part-time Master’s university certificate programme “Management of Protected Areas”. It has been designed primarily for specialists, who would like to expand their horizon, in order to meet the complex interdisciplinary challenges inherent to the ma-

agement of protected areas.

Over a period of two years, students must complete 66 course days, structured in the form of eight modules. To conclude the programme, students must demonstrate their skills in the context of a Master’s thesis. The results are presented to an international panel every two years, during the Klagenfurt Days of Protected Areas. Teaching is conducted by renowned experts from the fields of science and practice. Several (inter)national organisations, such as IUCN, Ramsar Convention, EUROPARC and UNESCO, act as advisory bodies for the university certificate programme.

So far, four rounds of the Master’s university certificate programme have already taken place. The fifth round started in September 2014. Participants are mainly from Europe, but some also join us from Asia, Africa, and Latin America. In this way, students can profit from the diverse experiences of fellow participants from other cultural spheres, as well as from the content conveyed by teaching staff. In order to keep this exchange going once the degree has been completed, former participants have established an Alumni Club, which organises excursions and specialist events, and serves as an information platform.

Title:	Master’s university certificate programme in the “Management of Protected Areas”
Funding:	Participant fees for students
Territory:	Global, European focus
Category:	Protected areas of different categories
Led by:	Michael Jungmeier

INFORMATION

TEACHING-13/14: Scientific and pre-scientific training

During the course of many years of research and development work, E.C.O. has accumulated a wealth of experience, comprehensive methodological expertise, as well as subject know-how. We strive to make this knowledge treasure available to the interested public through publications, and to young scientists through scientific courses. This year, we are offering the following courses:

Lecture course: Earth's Vegetation

Content: Systematic review of Earth's biomes; basic concepts of vegetation ecology, such as competition, process of plant community forming, or succession; linked excursion to the Biosphere Reserve Nockberge

Where: Department of Geography and Regional Studies at the Alpen-Adria-Universität
Lecturer: Dr. Hanns Kirchmeier

Seminar course: Elective Module Sustainable Development

Content: Dilemmas, aporias and approaches to solutions for current topics related to sustainable development; examination of the viability of theoretical concepts and interdisciplinary working methods in practical applications; sequential modules in the summer and the winter semester: participation in the course is a prerequisite for gaining the university's certificate in sustainability.

Where: Institute of Cultural Sustainability, Faculty of Interdisciplinary Studies, Alpen-Adria-Universität

Lecturers: Management team including Ass. Prof. Dr. Renate Hübner, Univ.-Prof. Dr. Franz Rauch, Ass. Prof. Dr. Franziska Weder and Dr. Michael Jungmeier, as well as teaching staff from various faculties and disciplines.

Seminar course: Protected Areas in the Alps-Adriatic Region

Content: Planning and management of protected areas from a geographical perspective;

inclusion of the cooperation Science_Link with the Biosphere Reserve Nockberge
Where: Department of Geography and Regional Studies at the Alpen-Adria-Universität
Lecturers: Univ.-Prof. Dr. Heike Egner and Dr. Michael Jungmeier

Seminar course: Project Management for Ecologists; Planning, Management and Evaluation of Interdisciplinary Projects

Content: Introduction to the fundamental concepts, principles and techniques of project management; skills are tested on practical examples

Where: Division of Conservation Biology, Vegetation Ecology and Landscape Ecology, Vienna University

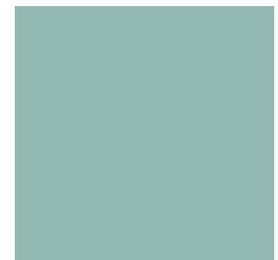
Lecturer: Dr. Michael Jungmeier

Seminar course: Bachelor Seminar for Geographers

Content: Technical and methodological assistance and support of Bachelor's theses (basic research or application-oriented) at the Department of Geography and Regional Studies; the topic diversity of the theses ranges from issues related to the management of alpine meadows via research on the effects of climate change, to the development of mobile GIS systems.

Where: Department of Geography and Regional Studies at the Alpen-Adria-Universität
Lecturers: Ass. Prof. Dr. Kirsten von Elverfeldt and Dr. Michael Jungmeier

In a series of seminars and workshops, E.C.O. supports teachers and schoolchildren with the development and implementation of pre-scientific papers.



What. When. Where.

Events over the course of the year

27.7.2013: Click. Under the expert guidance of Christian Brandstätter, the E.C.O. team embarks on a photography course, to improve skills in photo technology and composition.



5.8.2013: Conference. The international experts' visits to Sabah Parks (Borneo) conclude with a presentation of the results in Kota Kinabalu.



9.9.2013: Festive event. Within the framework of a well-attended evening event, we present Volume V of the Proceedings of the MSc programme "Management of Protected Areas".



19.9.2013: Early science. Pupils from BORG Spittal receive an introduction to pre-scientific work at Bios Mallnitz, offered jointly by the National Park Hohe Tauern and by E.C.O.



3.10.2013: Reading. Nature. Together with prominent guests such as the Mongolian shaman Galsan Chingak or the scientist Prof. Georg Grabherr, Hanns Kirchmeier and Michael Jungmeier demonstrate how vegetation experts "read" the landscape.



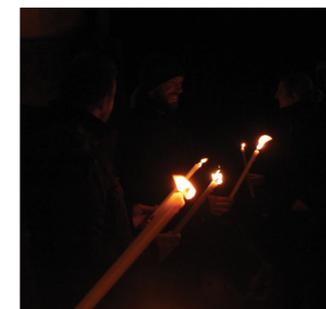
5.11.2013: Exhibition stand. The new exhibition design of the Austrian National Parks is presented at the Interpädagogica in Graz, and is met with huge interest.



29.11.2013: New friends. Following the initiative of Mag. Beatrix Taurer-Geher (Volksbank Velden), the association "Friends of the university certificate programme 'Management of Protected Areas'" is founded with the aim to support future participants.



20.12.2013: At the close of every year. The traditional E.C.O. Christmas party is held high above the city of Klagenfurt on Magdalensberg, which we explore during a torch-lit walk.



21.2.2014: Prelude. In the presence of a large number of guests, once again, E.C.O. celebrates the start of a new year.



21.2.2014: In a meeting. As tradition demands, the annual office meeting is held at the start of the year. A joint piece of "art" concludes a productive day.



21.2.2014: Excellent. Elisabeth Kreimer successfully concludes her training in "Management in Protected Areas" with a thesis on crowdfunding.



24.3.2014: Botanics. The general assembly of the Carinthian Natural History Association unanimously elects Hanns Kirchmeir to be the head of the specialist division for botanics. Hanns presents a series of images from the "World Heritage Beech Forest".



2.5.2014: Summit meeting. At the foot of the Großglockner, Federal Minister Andrä Rupprechter presents the "Thematic Trails of the Year Award", as certified by E.C.O.



21.5.2014: Maiden flight. Much applause by invited guests accompanies E.C.O. pteryx on its first flight.



23.5.2014: Mobile city lab. The book "Parks 3.0 . Protected Areas for a Next Society" is presented in the container landscape in front of Vienna's University of Technology.



13.6.2014: Lendspitz Day. In the project "city meets nature", interested citizens from Klagenfurt can explore the European Protected Area with expert guidance.



28.6.2014: Opening. "Hirschbirn hirsch'n" (Hirschbirn is a pear variety) offers informative and interactive activities in the Nature Park Pöllauer Tal, which was enthusiastically enjoyed by both young and old on the opening day.



Distinction!

Susanne Glatz-Jorde and Hanns Kirchmeir: Carinthians of the Day

The Carinthian media also became aware of our successful activities in Africa. The Kleine Zeitung elected Susanne and Hanns as Carinthians of the Day on the 11th of December, 2013. The complex project management across five African countries does indeed deserve recognition: In terms of technical knowledge, organisation skills, logistics, and – not least – physically, this is extremely challenging work. Heartfelt congratulations!



The WKÖ (Austrian Economic Chamber) honours successful entrepreneurial activities

As an authorized engineering firm, E.C.O. is a compulsory member of the Austrian Economic Chamber (WKÖ). “Our” chamber frequently tends to argue against the protection of nature and the environment, citing reasons of bureaucracy and employment figures. Now the WKÖ has honoured E.C.O for its many years of “successful entrepreneurial activity”. Chamber president Franz Pacher presented Michael Jungmeier with the certificate of achievement on the 19th of February 2014. This pleasing event shows that, in truth, real-life nature conservation and employment are no longer a contradiction.



Further Reading

Books

- GETZNER, M., JUNGMEIER, M. (eds.), 2014: Special issue: The contribution of protected areas to sustainability. In: *Int. J. Sustainable Society*, Vol. 6, Nos. 1/2
- GETZNER, M. & JUNGMEIER, M. (eds.), 2013: Protected areas in focus: Analysis and evaluation. *Proceedings in the Management of Protected Areas Vol. 4*, Klagenfurt: Heyn-Verlag, 151 p.
- KREIMER, E., 2013: Raising Money for Conservation. A self-experiment in crowdfunding. Master Thesis. University of Klagenfurt, 74 p.
- LANGE, S. & JUNGMEIER, M., 2014: Parks 3.0 – Protected Areas for the Next Society. Series „Proceedings in the Management of Protected Areas“, Vol. VI; Series editors: Heike Egner & Michael Jungmeier. Heyn Verlag, 94 p.

Journal articles and contributions to edited volumes

- GETZNER, M. & JUNGMEIER, M., 2014: Editorial – The contribution of protected areas to sustainability. In: *Int. J. Sustainable Society*, Special Issue: The contribution of protected areas to sustainability. Vol. 6 Nos. 1/2 2014: 1–8.
- HUBER, M. & JUNGMEIER, M., 2014: Knowledge, parks and cultures – Protected area management and intergenerational learning. In: Mitrofanenko, T. (ed.): *Intergenerational learning and innovation for sustainable development*. Final conference of the project „Big Foot: Crossing Ge-

nerations, Crossing Mountains“ Conference proceedings 5.-6.6.2013, UNEP Vienna. 59-67. Download link: <http://www.bigfoot-project.eu/project-conference.htm>

- JUNGMEIER, M., 2014: In transit towards a third generation of protected areas? Analysis of disciplines, forming principles and fields of activities by example of recent projects in protected areas in Austria. In: Int. J. Sustainable Society, Vol. 6, Nos. 1/2: 47–59.
- JUNGMEIER, M., KÖSTL, T., LANGE, S., BLIEM, M., 2013: The art of omission: BRIM^{Nockberge} – design of a Biosphere Reserve Integrated Monitoring for the Carinthian part of the Biosphere Reserve Salzburger Lungau & Kärntner Nockberge. Eco.mont 5 (2):15–22.
- KIRCHMEIR, H. & PAAR, M., 2014: Buchenurwälder in Europa als UNESCO-Weltnaturerbe. [Virgin Beech Forests in Europe as UNESCO World Nature Heritage] In: UMWELT-DACHVERBAND (Hrsg.): natur.belassen. Nationalparks Austria 06.14, 7-9
- KOVAROVICS, A. & JUNGMEIER, M., 2014: Lebensader quer durch Europa. [Lifeline through Europe]. Land & Raum 2/2014: 27-31.
- PICHLER-KOBAN, C., WEIXLBAUMER, N., MAIER, F. & JUNGMEIER, M., 2014: Die österreichische Naturschutzbewegung im Kontext gesellschaftlicher Entwicklungen. [The Austrian Nature Conservation Movement in the Context of Societal Developments] In: Franke, N. M. & Pfenning, U. (Hrsg.): Kontinuitäten im Naturschutz, Nomos Verlagsgesellschaft, Baden-Baden, 181–207.

Other printed works:



- KOVAROVICS, A. & KREIMER, E., 2014: Themenwege des Jahres 2014 in den Schutzgebieten Österreichs. [Thematic Trails of the Year 2014 in Austria's Protected Areas] Fächer, 40 p.

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Published by:

E.C.O. Institut für Ökologie GmbH
Kinoplatz 6, A-9020 Klagenfurt
<http://www.e-c-o.at>

Design: Sigrun Lange und Elisabeth Kreimer

Photo credits: Helge Bauer, Mario Broggi, Rosi Hartl, Marion Lobitzer, Angelika Staats, Rudi Schachenhofer
E.C.O. Institut für Ökologie: Susanne Glatz-Jorde, Michael Huber, Michael Jungmeier, Hanns Kirchmeier,
Tobias Köstl, Anna Kovarovics, Elisabeth Kreimer

R U L T U E E G S V S R Z A R Z I J Z Z R F J S E F G U A W T Z T Y D N R
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