

Novelties
Specialities
Classics

by E.C.O.

E.C.O.

YEARBOOK Volume IV / July 2016

Nature Conservation in the 21st Century

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Team on the move

Tempora mutantur, nos et mutamur in illis. As times are changing, we are changing, too. This is why we once again have much to report in this yearbook.

For example, we have established ourselves in the Lakeside Science and Technology Park at the interface between university and innovative companies. We have gained new competences and thus expanded our expertise. Why this is significant for nature protection of the 21st century will be discussed from page 8 onwards.

In a process of organizational development, we have restructured our competences into the four special fields of parks, nature, sustainability and communication (page 7).

We can look back on great successes and valuable learning experiences regarding our projects for nature protection in the 21st century. Our project portfolio ranges from small projects right in front of our doorstep up to major projects out of Europe. A selection of projects will be presented starting on page 18. As a Carinthian company, we are particularly proud of our international achievements: our project on erosion and pasture management in the Caucasus is in its final phase (page 27). We are furthermore accompanying the project of establishing the European beech forest, stretching over 13 countries, as the historically largest world heritage (page 19). Together with an international team of experts we have won a worldwide competition and for the first time are working in Bhutan, the country of 'Gross National Happiness'. This means that we can contribute to saving extraordinary river ecosystems on the slopes of the Himalayas (page 33).

Besides presenting our work, this yearbook also offers some culinary highlights: we are inviting our readers to a culinary world tour, with our department heads revealing their personal favorite specialities.

Thus, we want to show which products we have been offering for years and which ones are new on the 'menu'. What are our 'ingredients' and 'preparation tricks' and, who are the 'chefs' who, thanks to their long-term experience, are capable of finding just the right mix and flavour to create outstanding results?

In this regard, we can report that our company has organically developed and that we have many plans. We would like to thank our colleagues, clients, project partners and companions for the good cooperation and we are looking forward to the next projects to come.

For the editorial team, Lisi Kreimer and Anna Kovarovics







Interview with Dr. Grazia Borrini-Feyerabend about nature conservation in the 21st century

Elisabeth Kreimer/Anna Kovarovics: Every year we talk to experts about nature conservation in the 21st Century to share their knowledge and views with our project partners and friends. This year, after three editions of our yearbook, you are the first woman to answer our questions. Grazia, what do you think is the reason that there are very few women in the leading positions in the field of nature conservation?

Grazia Borrini-Feyerabend: The easy answer is that there are fewer women in leading positions in every field... but I am not convinced this is the full story. In our field there are the notable exceptions, such as the fact that a number of Director Generals of IUCN have been women. In all cases, this is a good question. The statement should be assessed quantitatively and examined...

We want to contribute to shape nature conservation in the 21st century. From your point of view, what are the biggest challenges in nature conservation in the future and how should they be handled?

There is no doubt that there is one challenge and it is about governance of land, water and natural resources. Who is today, and who will be in future, in charge of taking and implementing decisions about nature? If the decisions about nature will be made by distant authorities and only on the basis of financial and political considerations... let us just kiss it goodbye.

The world is becoming smaller, is drawing closer together. The internet enables us to create networks with experts from different fields and from all over the world. The exchange of knowledge also offers great opportunities for protected areas. In your opinion, how can individual protected areas benefit from this development?

More than networks of experts we need networks of concerned local people who can speak together and figure out what is happening and what they wish to happen. Experts can help if they are linked with people... Experts alone can at best make fun conferences... but they hardly make conservation happen.

Grazia, you are member of the Steering committee of the ICCA Consortium and responsible for the Global Coordination. This association deals with territories and areas conserved by indigenous peoples and local communities. What are the aims of this association?

The Association is rooted in the movement for equity in conservation that emerged and became stronger and better equipped across the millennium. The arrogant and ignorant belief that protected areas had to evict people to "secure conservation" slowly gave way to the understanding that no one can secure conservation better than local people – provided they are not impeded to do it, and that they are properly self-organised, respected, supported and equipped with appropriate means. It took some of us many years, but we managed to make the case for better visibility and support to the territories and areas collectively conserved by indigenous peoples and local communities. The ICCA Consortium was born officially at the 2008 World Con-

ervation Congress of Barcelona, and it was legally registered in Switzerland a couple of years later. Today, it includes one hundred organisations and three hundred individuals from seventy-five countries-- all united by the mission to obtain appropriate recognition and support to “the territories and areas conserved by indigenous peoples and local communities”, abbreviated as ICCAs.

Protected areas should not only protect nature but also contribute to a sustainable development of the region. In order to meet this obvious challenge, new approaches are needed. Can you think of any promising approaches?

The best approach I have in mind is the one of the ICCAs themselves. You see... ICCAs have three characteristics. The first is a strong and profound bond uniting a community with a territory. The second is the community's de facto capacity to take decisions about that territory, and get those respected (no need for de jure ownership or governance rights - de facto governance is sufficient). And the third is the fact that those decisions lead to the conservation of nature.

When the three conditions are met we do have an ICCAs. When the three conditions are met we also usually have a nature-supported livelihood. Fisherfolks, pastoralists, forest dwellers but also agriculturalists who depend on the integrity of a watershed, or modern communities who keep their environment attractive for tourists ... they all must take important decisions together. Many such communities develop unique knowledge, skills and capacities vis-à-vis their environments and natural resources.

Change is bound to happen, but it is in the integrity and strength of that bond, that relationship between communities and their natural contexts that we can find the most powerful force for sustainable development. Not development decided from outside and aiming only at making money, but the opposite: development that comes from within the community, depends on the knowledge and care of the community about its own environment and is guided by the wise decisions the community has been able to make balancing a variety of values.

Amongst others, visitor centres and guided tours are very important offers for experiencing nature in protected areas. However, a professional preparation, technically as well as pedagogically, is needed to ensure a good quality of such offers. How can we raise interest of future generations for nature and nature conservation?

I believe what you say is partially true. You can indeed deepen your understanding and appreciation of nature through interpretation centres... but it is also important that our urban kids simply get more exposed to walking in the woods, swimming in lakes, eating berries and roots and plants from the wild, observing birds at sunsets, insects at mid day and, at night, listening to frogs and stories about the place...

First comes love, i.e. the “bond” I was mentioning before. Then the knowledge and the visitors' centres can also come. And they will be all the more appreciated.

Thank you for the interview.



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

Who we are ...



Selina Trellher:
Office-management,
office apprentice
Her speciality:
Friendly customer
care



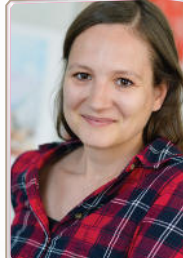
Corinna Hecke MSc:
Project leader,
biologist, drone pilot
Her speciality:
Spectacular drone
recordings



Alfred Triller:
IT-technician specialised
in open source solutions
His speciality:
Savvy IT-solutions




DI Susanne Glatz-Jorde
MSc: Project leader,
landscape and object
planner with Africa-
experience
Her speciality:
Tailor-made action
planning



DI Anna Kovarovics:
Project leader, lands-
cape planner specialised
in theme trails
Her speciality:
Exciting visitor
information



DI Michael Huber:
Head of department,
landscape planner
specialised in internati-
onal protected areas
His speciality:
Clever protected area
planning



DI Tobias Kestl MSc:
Project leader, GIS,
vegetation ecologist
specialised in alpine
farming
His speciality:
precise vegetation
surveys



Mag. Elisabeth
Kreiner MSc: Head of
Department, human
geographer, graphics
and communication
Her speciality:
Creative communi-
cation design




DI Dr. Christina Pichler-
Koban: Project leader,
landscape planner,
nature and society
Her speciality:
Detailed nature
protection history




Caroline Fiedler:
Office-management,
tourism manager
Her speciality:
Perfect office
organization



DI Daniel Zollner:
Head of department,
landscape planner,
practising farmer
His speciality:
Creative workshop
designs



Dr. Hanns Kirchmeir:
Managing director,
head of department,
vegetation ecologist
and IT-expert
His speciality:
well-founded analyses



Dr. Michael Jungmeier:
Managing director,
ecologist and human
geographer
His speciality:
stringent project
architecture

What we offer...

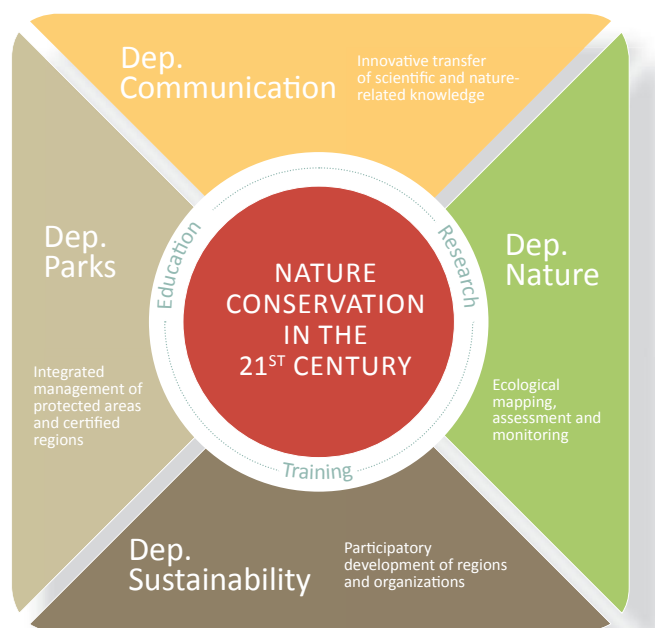
We offer consulting services, planning, research and training in the field of protected areas and certified regions. With our work, we support clients in the maintenance and improvement of natural habitats, enable extraordinary nature experiences and advance the living and economic conditions in the respective regions.

The outstanding quality of our services is based on a combination of ecological expertise, excellent communication and effective project management (E.cology, C.ommunication and O.rganisation). We combine stringent specialist concepts with experience in technical implementation and professional design. Furthermore, we have special competences in the fields of integrated management of protected areas, vegetation ecology and nature protection in forests as well as ecological GIS- and IT-applications.

Our departments

Nature protection in the 21st century is participatory, technology-based and international. This makes it necessary for a research-, consulting- and planning company to constantly stay up to date regarding standards, developments and trends. To be able to optimally support our clients, we have to know the state of the art in research, practice and networks. To be optimally equipped in this respect, we have developed four departments:

- Parks – Integrated management of protected areas and certified regions
- Nature – Ecological mapping, assessment and monitoring
- Sustainability – Participatory development of regions and organizations
- Communication – Innovative transfer of scientific and nature-related knowledge



Our heads of department are key knowledge carriers who serve as contact persons inside and outside of our company. Mike Huber, Hanns Kirchmeir, Lisi Kreimer und Daniel Zollner are highly-demanded pulse generators at workshops and conferences, appreciated partners in project development and leaders of demanding plans and projects.

Interview

Based on three licence examinations, E.C.O. is restructuring its competences. Christina Pichler-Koban (landscape planning), Hanns Kirchmeir (biology/ecology) and Michl Jungmeier (geography) discuss this advancement.

E.C.O. is restructuring itself regarding its competences, why?

Christina: E.C.O. has its roots and focus in the field of ecology; however, much of what we are doing also touches upon questions of landscape planning and geography. The borders are fluid. For example, it is debatable whether the management plan for protected area X should be considered an ecological, a planning or a geographical document.

Hanns: What adds to this is that we have undergone a process of growth in the last few years; we have worked towards establishing new fields of expertise and considerably expanded our horizons. This is why we now want to make visible this new breath in our organisation. Our competence as an engineering office means that our clients can be sure to be provided with professional, state-of-the-art services and that there is a solid company behind every member of staff. This is intended to highlight the responsibility, credibility and long-term perspective with which we approach new projects.

Ecology, landscape planning and geography, what do these three departments represent?

Hanns: Ecology has been and still is the core competence of our company. For two decades, we have been working towards analysing and making visible complex ecological relations in order to serve as a basis for processes, planning and decisions. We are working with modern technologies, with Big Data, with mobile devices, with drones and interactive models. This opens completely new perspectives on nature conservation. If we want to remain credible as nature conservationists, we have to think and work in bigger contexts.

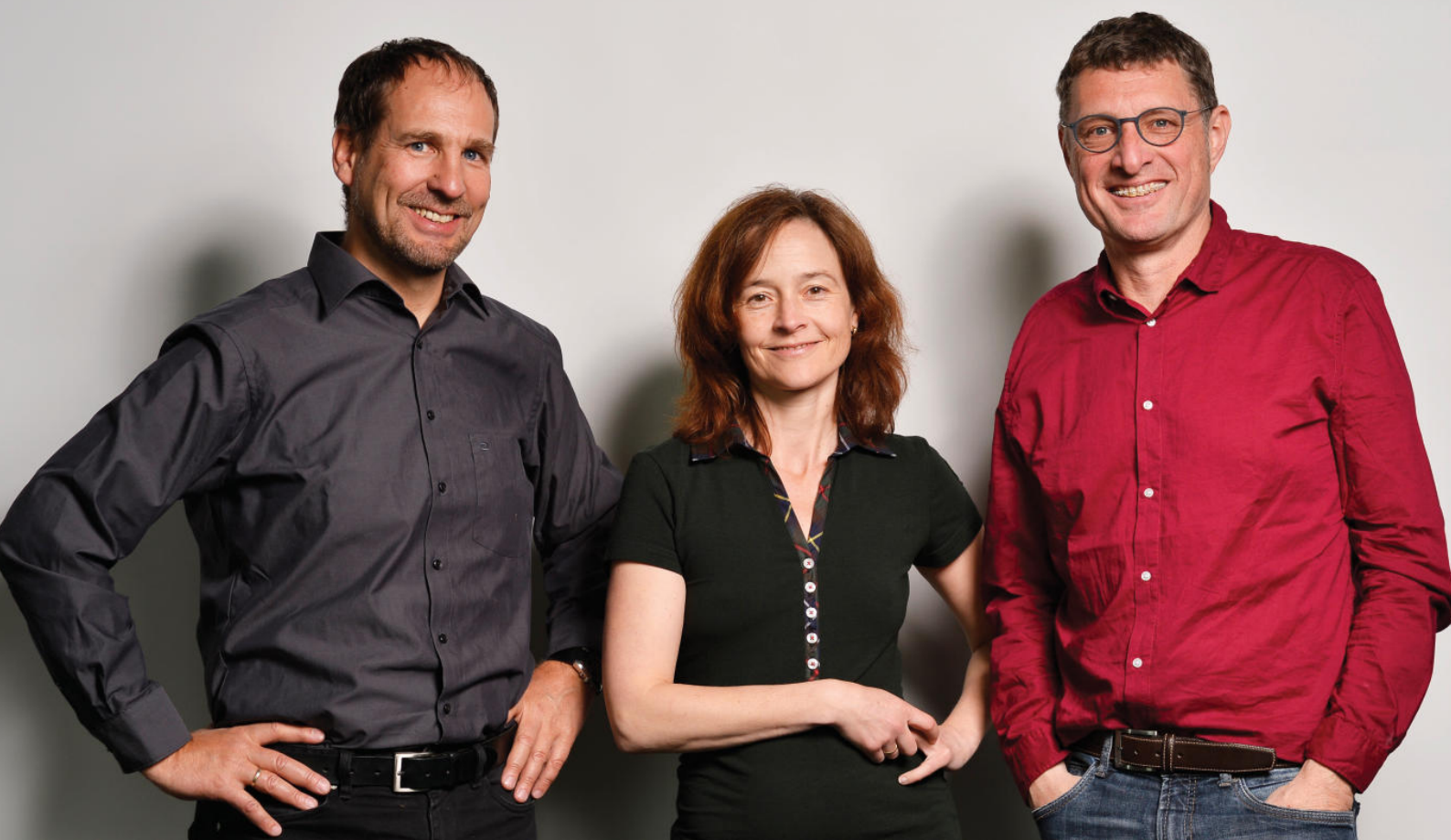
Michl: This is also where geography comes into play. As a human geographer, thinking about how people organise spatial activities results in a different image of nature conservation. The dynamics of cultural landscapes, the visual analysis of landscapes, the assessment of ecosystem services and many of our projects in the field of development cooperation are nature conservation projects, but cannot or not only be approached with methods from natural science. This quickly leads us to econometric methods, intervention logics, indicator development and of course to the manifold territorial concepts of nature conservation.

Christina: Yes, and then all of this has to lead to a concrete plan. As a landscape planner, I do not only have to consider functional, technical and legal aspects, but also take cultural, social and sometimes historical relations into account. Our plans for and of protected areas of course constitute landscape planning in the broadest sense. Regarding object planning, our programme includes various visitor facilities, such as theme trails, perhaps also planning of compensatory measures, revitalisations or open space design.

Michl: More explicitly than before, we are now configured as an interdisciplinary team, looking from different perspectives at the same topic, namely nature conservation in the 21st century.

Where is the journey taking us, E.C.O.?

Michl: We are an extramural research institute for questions of applied nature conservation



research. Most of our projects also have major scientific components, which we would like to expand in the years to come. Thus, our research on ecosystem services or the management of protected areas has a place in international scientific discourse. Generally, we will become increasingly internationalised. Unfortunately, the current local situation is not exactly rosy and it is a shame that it is often just about pushing through individual interests.

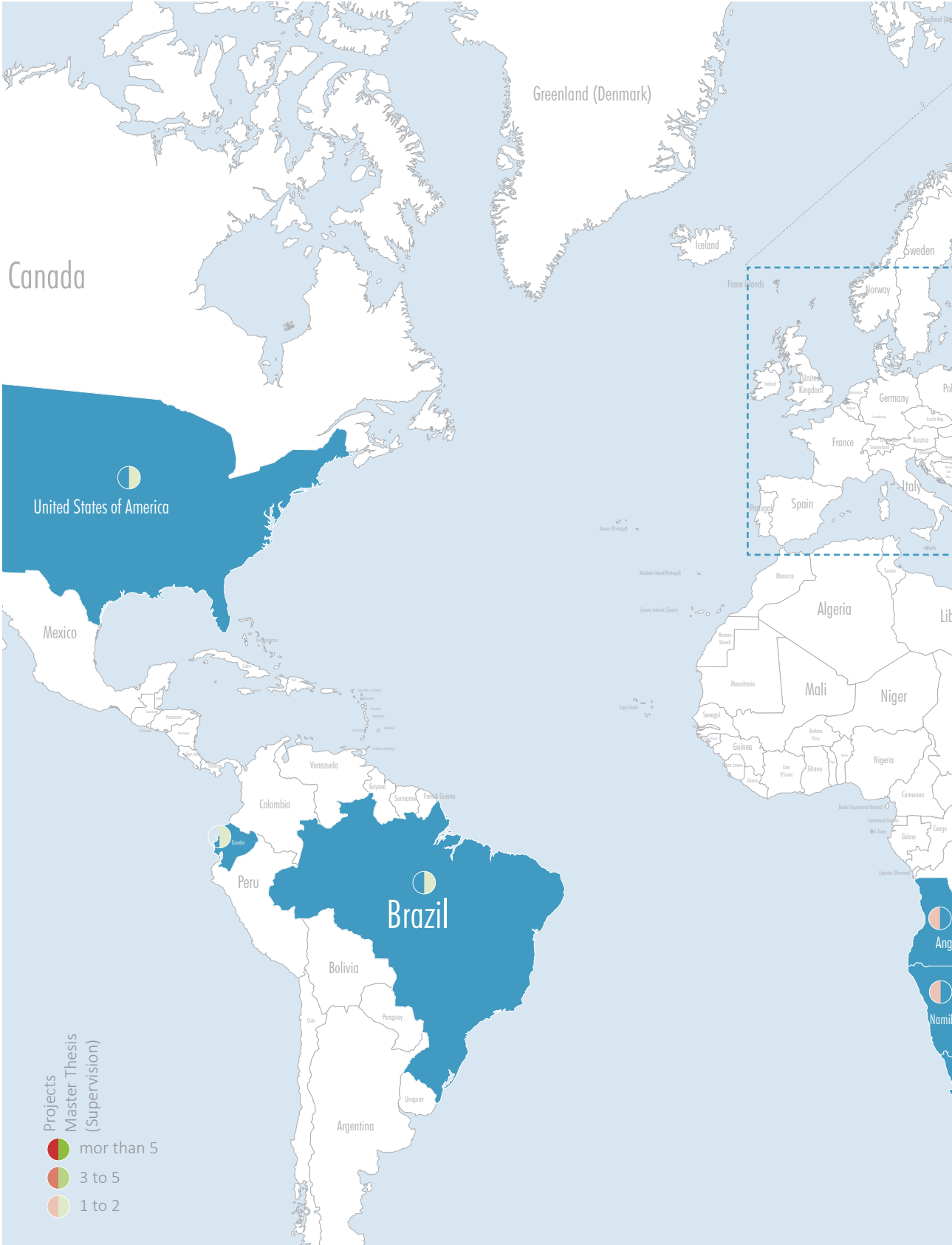
Hanns: The issue of applied nature conservation research is also very important to me; what also distinguishes us from academic research is that we have a different relation to our clients; at the same time we have to adhere to the highest and most credible scientific standards in our work. This is why it is so important to expand our departments in order to develop specialised teams who are internationally competitive in their respective fields, as will also be discussed in this yearbook. At the same time, this offers E.C.O.'s employees greater freedom and more opportunities for personal development.

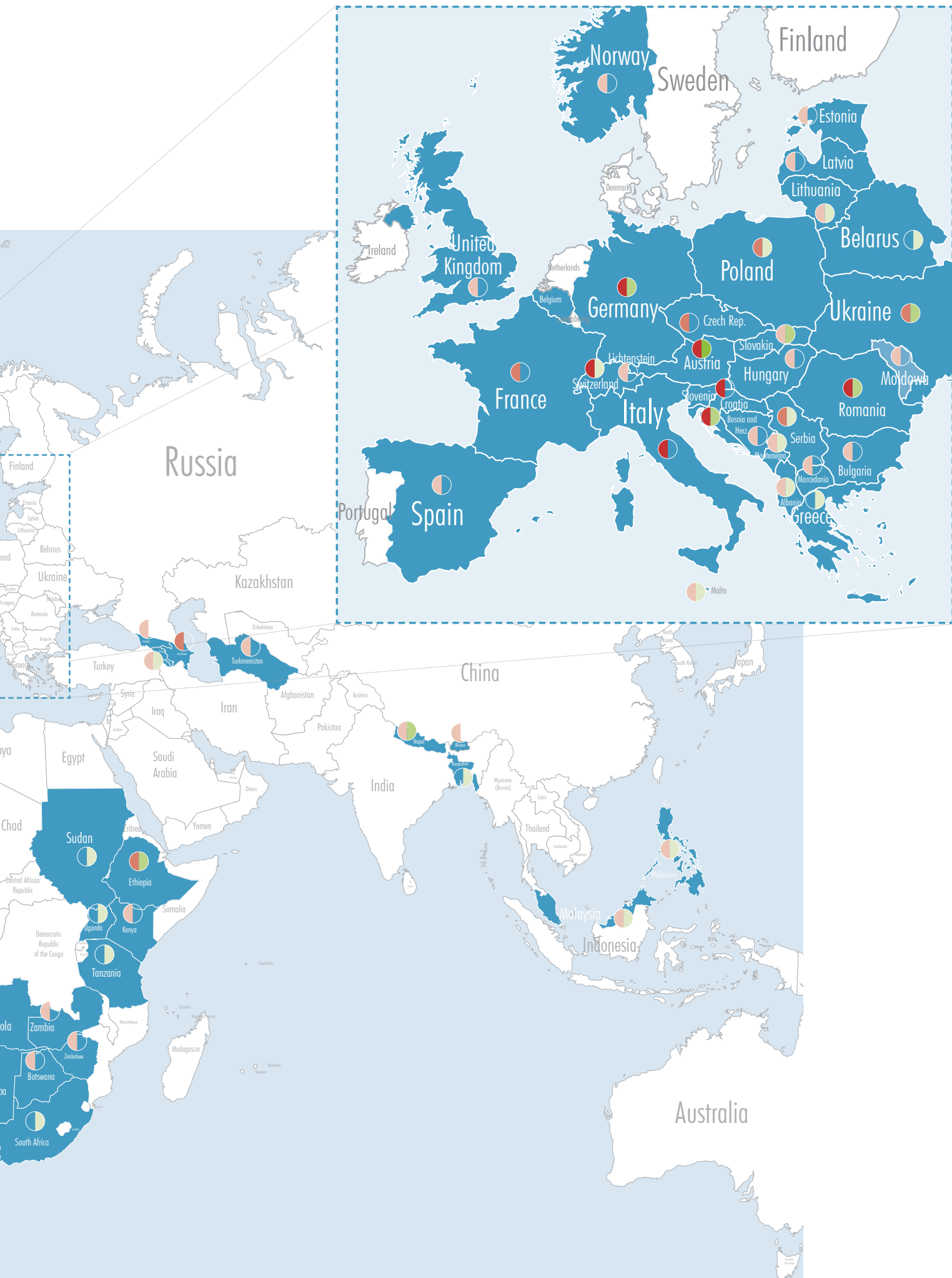
Christina: For me, forwards also means backwards: I want to advance scientific research on the historical roots of nature conservation.

Hanns: It is, by the way, quite a challenge to find a good mixture of generalisation and specialisation among this wide variety of topics and questions; both the team as a whole and the individual people involved have to manage this balancing act. As for me, I am happy and grateful to work in this area; our work really reaches into the life quality of individuals and thus has a very meaningful component.

Michl (laughs): One thing is for sure: we definitely won't get bored in the next few years.

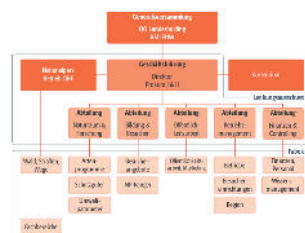
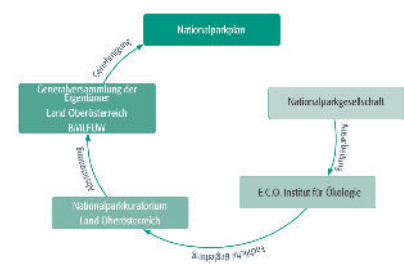
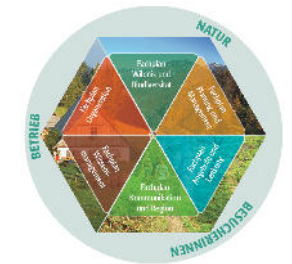
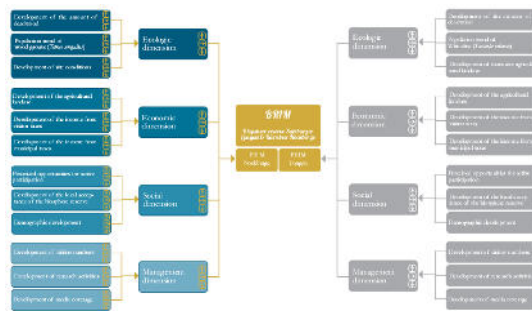
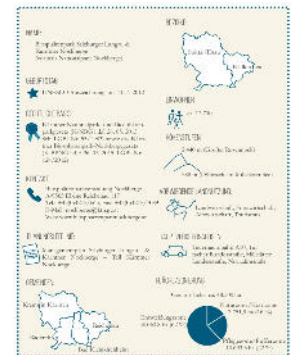
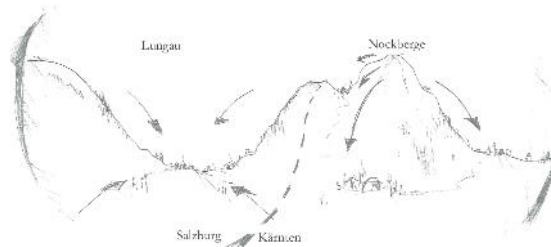
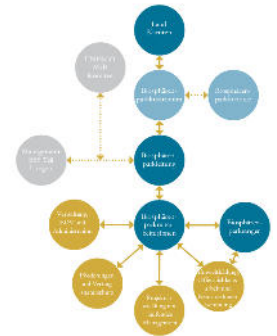
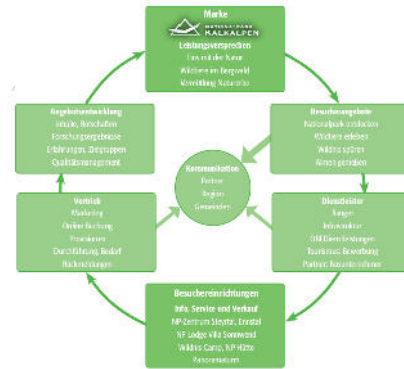
Where we work ...



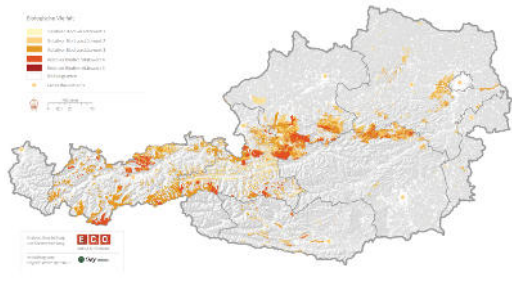
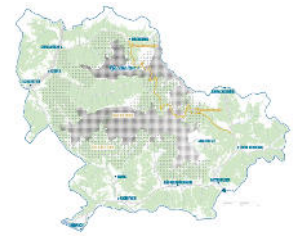
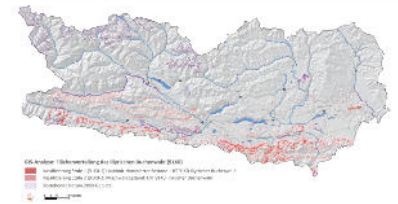
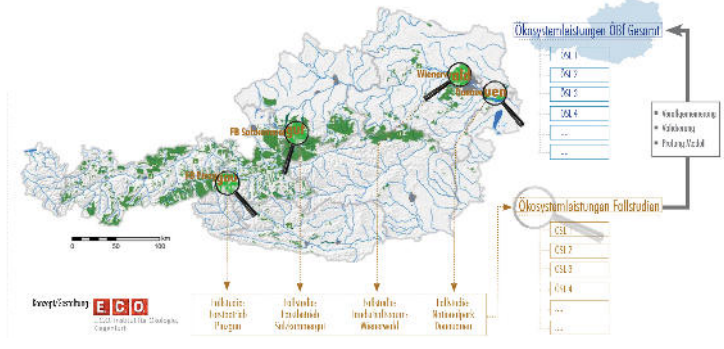


How we work ...

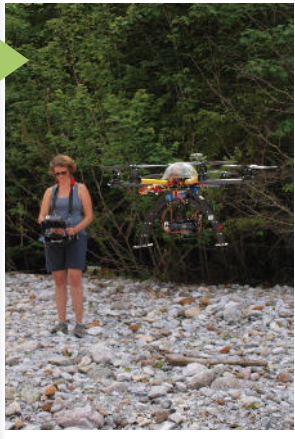
Infographics | Visualisations



GIS | Cartography



Technology | Tools





International Year of Global Understanding

2016 is the “International Year of Global Understanding” (IYGU). The international umbrella organisations of the natural, social and human sciences, in cooperation with UNESCO, proclaimed this year: “Our environment is changing in many ways and at an unprecedented speed. Climate change, loss of biological diversity and ecosystems, increase in frequency and severity of extreme events, desertification and land degradation, overfishing and deforestation are just some of the many ecological challenges we are facing.”

Nature conservation is thus placed into a very large context and particular importance is attached to protected areas as model regions for sustainable development. We are, of course, pleased that many of E.C.O.’s projects are related to this Year of Global Understanding. For example, within the project Integrated Erosion Control in the South Caucasus (page 27), we contribute to finding and implementing solutions to an acute problem in the high altitudes of the Caucasus. This project must be realised across country boundaries, in the concrete case the boundaries between Armenia, Azerbaijan and Georgia. During the project period, the political tensions between Armenia and Azerbaijan became evident. The cooperation on a technical level was still continued. If, for example, participants from Georgia and Azerbaijan take part in a study tour through Austria, this can be seen as a contribution to the development of a global understanding.

Similar considerations also apply to our continuance of the socioeconomic monitoring in the KAZA-region. Here, the world’s largest protected area is being developed in the border zone between Angola, Botswana, Namibia, Zambia and Zimbabwe. This project is supported by the Peace Park Foundation. As the name already suggests, this project is not limited to the conservation of nature, like for example of the biggest population of African elephants, but also intended to help improve the general relations among these neighboring countries.

The Year of Global Understanding aims to contribute to:

- making global processes and challenges understandable
- intensifying research, education and information
- illustrating the influence of daily decisions on global change and
- reminding the world citizens of their global responsibility.

We are glad to contribute to these goals with our daily work and see many opportunities to place our competences in the fields of protected areas and nature conservation into a bigger context.

Corporate Publishing for Protected Areas

Content needs form. Attractively designed management plans and regional protected area magazines or other print products transmit information, illustrate the values of the protected area, awaken people's interest in the protected area and offer entertainment. These print products considerably shape the image of a protected area in the long run and transport corporate identity perhaps better than any other marketing measure.

Corporate publishing products are increasingly popular. A good number of clients from the field of protected area management trust in our experience with the conceptualisation and design of such products. From reports, project descriptions, management plans, academic papers, interviews or portraits – we deliver the requested print product, customised to match the respective corporate design.

For protected areas and regions there are many possibilities of using corporate publishing: regularly published protected area magazines can help improve the identification of residents, stakeholders and interest groups with the protected area. They offer the opportunity to obtain information about current developments, present new projects and announce events and activities.

A well-designed management plan can present technical content, like e.g. development aims, action guidelines and goals as well as the implementation schedule for the years to come in a very attractive form. Besides typesetting and text layout, info graphics play a key role because they show complex relations in a simplified way so that they can be grasped at a glance.

We offer competent support during the entire development process of such print products: from the first conceptual draft to the target-group-oriented final print product. We support our clients with generating the contents (goal definitions, graphic design, implementation strategies, etc.) as well as with the textual and graphic design, the selection of special formats, various paper types and the optimal printing process.



Culinary World Tour with E.C.O.

Pictures from our archives show what we eat when we are at work.



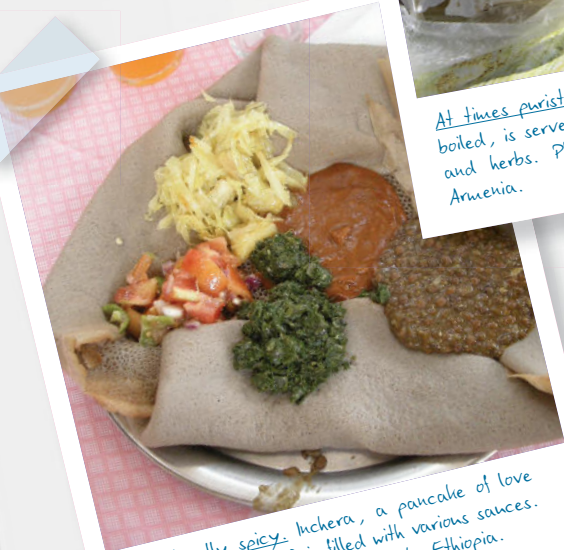
Often international. In the presence of our guests, Prof. Hans-Joachim Bodenhöter is cutting a multi-layer world cake. Blue Cube, Klagenfurt



With or without wine accompaniment. Salmone, Prosciutto and Fontasio perfectly go with a glass of Herlot. Parco Nazionale delle Dolomiti Bellunesi, Italy.



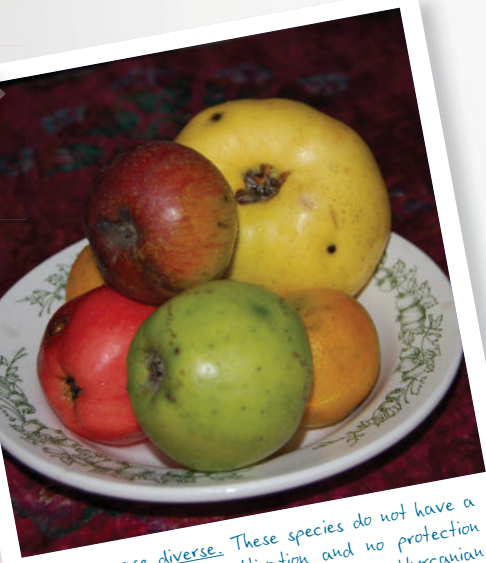
At times puristic. Potato, freshly dug out and just boiled, is served with pickled cabbage, cream cheese and herbs. Planned biosphere reserve, Shikahogh, Armenia.



Naturally spicy. Injera, a pancake of love grass (Eragrostis) is filled with various sauces. Simien Mountains National Park, Ethiopia.



Seldom royal. On the occasion of the celebrations of 100 Years of National Parks in Europe, King Carl XVI Gustaf of Sweden invites to a seafood-buffet. National park Kosterhavet, Sweden/Norway.



In any case diverse. These species do not have a name, no regular cultivation and no protection of origin but still taste wonderfully. Hyrcanian Forests, Azerbaijan.



Simple, but with style. Fixed snack on a strenuous journey through the Central Asian Steppe. Kopedak National Park, Turkmenistan



Foreign but still familiar. Howos, served with different fillings, remind of Tortellini or Masumdelu. Sargamautha National Park, Nepal.



Ideally in company. After a hard day of studying and training, this meal is just right. Prespa National Park, Albania.



Original. In the native country of the coffee bean, coffee is served sweet and strong after a long ritual in a traditional bamboo mng. Kafa Biosphere Reserve, Ethiopia.

Novelties

Development cooperation
Nature conservation history

Specialities

Research concepts
Management effectiveness
Integrative monitoring concepts

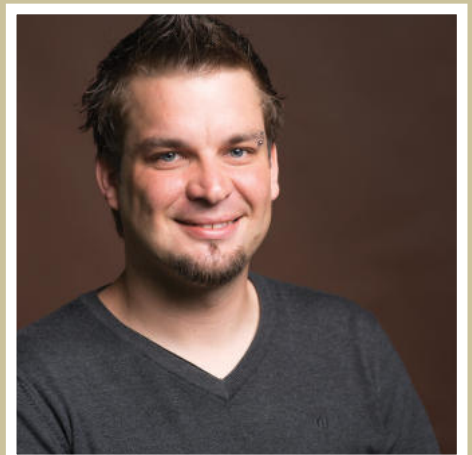
Classics

Submission process for international
certificates
Planning of protected areas
Management plans
Mission statements
Organisational manuals

Department: PARKS

Integrated management of protected areas and certified regions

*Michael Huber
Head of Department*



Nomination Dossier UNESCO-World Heritage “European Beech Forests”

Initial situation: Even though the beech is still the most common tree species in Europe, natural beech forests have already become very rare. 2007, the “Primeval Beech Forests of the Carpathians” were recognised as world heritage and was extended to the “Old Beech Forests of Germany” in 2011. Back then, the UNESCO committee recommended starting a screening process all over Europe so that further European primeval forests could join the ranks of world heritage sites. In an international discussion process, forest experts from eleven European countries identified possible forest candidates.

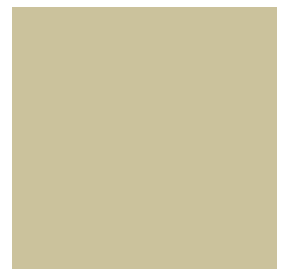
Together with the Federal Environment Agency, E.C.O. has been supervising the preparation of the world heritage “European Beech Forest” for quite a while now. The concrete project prepares the joint nomination of the eleven countries technically and content-wise. The results are presented in the Nomination Dossier and politically decided upon in a diplomatic process. In this process, the experts from the eleven participating countries have to be coordinated. Additionally, the new application must be reconciled with existing world heritage

“The largest world heritage submission in history“

sites. The result is a finalised and comprehensive Nomination Dossier, ready for submission to UNESCO.

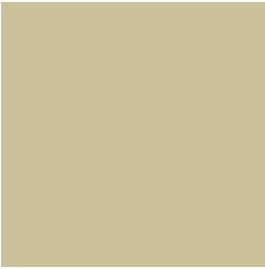
To be able to process the large amount of data (texts, documents, maps, photos, videos) from all 67 world heritage components, a database was created together with the company R3Gis

where the required materials can be uploaded and processed. This database has a WebGIS-application which allows for viewing GIS-data from the individual sites and thus for a precise overview of the condition and position of the primeval forests. Without this database, it would not have been possible to process the contributions from altogether 113 authors. What is noteworthy is that with the dark-sky preserve Ötscher-Dürrenstein, an Austrian dark sky has been nominated as world heritage. The finalised contributions were turned into a 500-page Nomination Dossier with an extensive appendix of maps and submitted to UNESCO in January 2016.



Title:	Submission of the Nomination Dossier “Primeval Beech Forests of the Carpathians and Other Regions of Europe“
Client:	Federal Ministry for Agriculture and Forestry, the Environment and Water Resources
Area:	Europe
Category:	UNESCO World Heritage Site
Project lead:	Hanns Kirchmeir, Anna Kovarovics

INFORMATION



Management Plan of the Kärntner Nockberge (Biosphere Reserve)

Initial situation: Since July 2012, the Kärntner Nockberge, together with the Salzburger Lungau, have been recognised by the UNESCO as largest Austrian biosphere reserve. The national and international criteria leave room for every biosphere reserve to set individual focuses and to implement their own solutions and projects. These are conceptualised in detail in management plans.

The management plan is a strategic instrument for the reserve’s orientation in the next 10 years, i.e. until 2025. The document furthermore provides information for involved and interested citizens and organisations relating to the biosphere reserve. E.C.O. has been engaged to devise a management plan for the Carinthian part of the biosphere reserve consisting of the Salzburger Lungau and the Kärntner Nockberge.

The creation of this management plan is a specialist planning in which various data are brought together in a participatory process. In this pro-

cess, the planning team, various involved parties and decision makers from the committees work together to define goals, strategies and measures to be taken. An important aspect in this regard is a structured success monitoring in the form of BRIM (Biosphere Reserve Integrated Monitoring). An important role is also taken by the residents of the region, experts and local interest groups, NGOs, initiatives and associations. Various workshops and events are held in this context.

“Cooperation instead of competition“

The process design comprises various phases, logically building upon each other: elaboration, coordination, resolution and presentation. The management plan is eventually agreed upon by the Board of Trustees of the biosphere reserve and brought to the attention of the federal government. The design of the management plan reflects the corporate design of the biosphere reserve (corporate publishing) and is broadly communicated. More than a hundred copies are available for interested people from the region and a short version is published as a supplement to the magazine “My Biosphere”, reaching 6,000 regional households. Additionally, an English short version addresses an international expert audience.

Title:	Management Plan 2015–2025 Biosphere Reserve Salzburger Lungau/Kärntner Nockberge – Section on Kärntner Nockberge
Client:	Biosphere Reserve administration Nockberge
Area:	Carinthia
Category:	Biosphere Reserve
Project lead:	Daniel Zollner

INFORMATION

Management Plan of the Natura 2000 site Lendspitz-Maiernigg

Initial situation: The European protected area Lendspitz-Maiernigg is located in the immediate vicinity of the city of Klagenfurt and is thus an urban protected area. The high land use density, the great variety of different interests and the high visitor pressure represent special challenges in this area. In 2007, a management plan was created which, considering the highly dynamic developments, needs to be updated.

The goal of this revision is to examine the available data on protected species and habitats across Europe, determine the current status of the species and habitats listed in the FFH-directive and, respectively, the Wild Birds Directive, assess current threats and formulate measures accordingly. E.C.O. has been commissioned with this task by the Federal State of Carinthia within the framework of the programme “City meets Nature”.

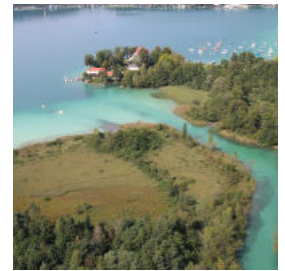
In cooperation with external experts, E.C.O. collects data on vegetation, bird life, fish, bats and selected invertebrates. In addition, selected individual protected species are addressed, namely the beaver, Desmoulin’s whorl snail and the thick-shelled river mussel. The habitat and

species mappings are carried out using the mobile GIS-application map&go. For strategy development, all individual results are brought together and potentially conflicting goals are identified. In a workshop, the working group defines and prioritises target species for the area, for which in turn conservation and development goals are formulated.

“Urban protected areas – new challenges“

The cartographic representation of protected habitats and species and related conservation measures is a central element of the management plan which will be valid until 2025.

The close cooperation with the Alpe-Adria-University of Klagenfurt makes it possible to address current questions in lectures and seminars. Already in 2015 and 2016, valuable basis data and method designs were developed in this context. This creates a win-win-situation for university education and nature conservation.



Title:	Management Plan Natura 2000 Site Lendspitz-Maiernigg – Revision 2015
Client:	Office of the Federal Government of Carinthia
Area:	Carinthia
Category:	Natura-2000-Site
Project lead:	Susanne Glatz-Jorde

INFORMATION



Kalkalpen National Park Plan

Initial situation: In the last two decades, the Kalkalpen National Park has invested a lot in baseline studies, especially in a comprehensive inventory of its natural assets as well as in a range of expert planings. The area is a national park, a Natura 2000-site, a Ramsar-site and perhaps soon also a world heritage site. This makes management a complex task in this context.

A new management plan, the national park plan, is intended to serve as foundation for the work to be done in the next ten years and is to be devised in coordination with all interest groups involved. The recommendations for management planning of Austrian national parks conceptualised by E.C.O. are the basis for this plan. In addition, new developments like the

“A milestone
of park
development“

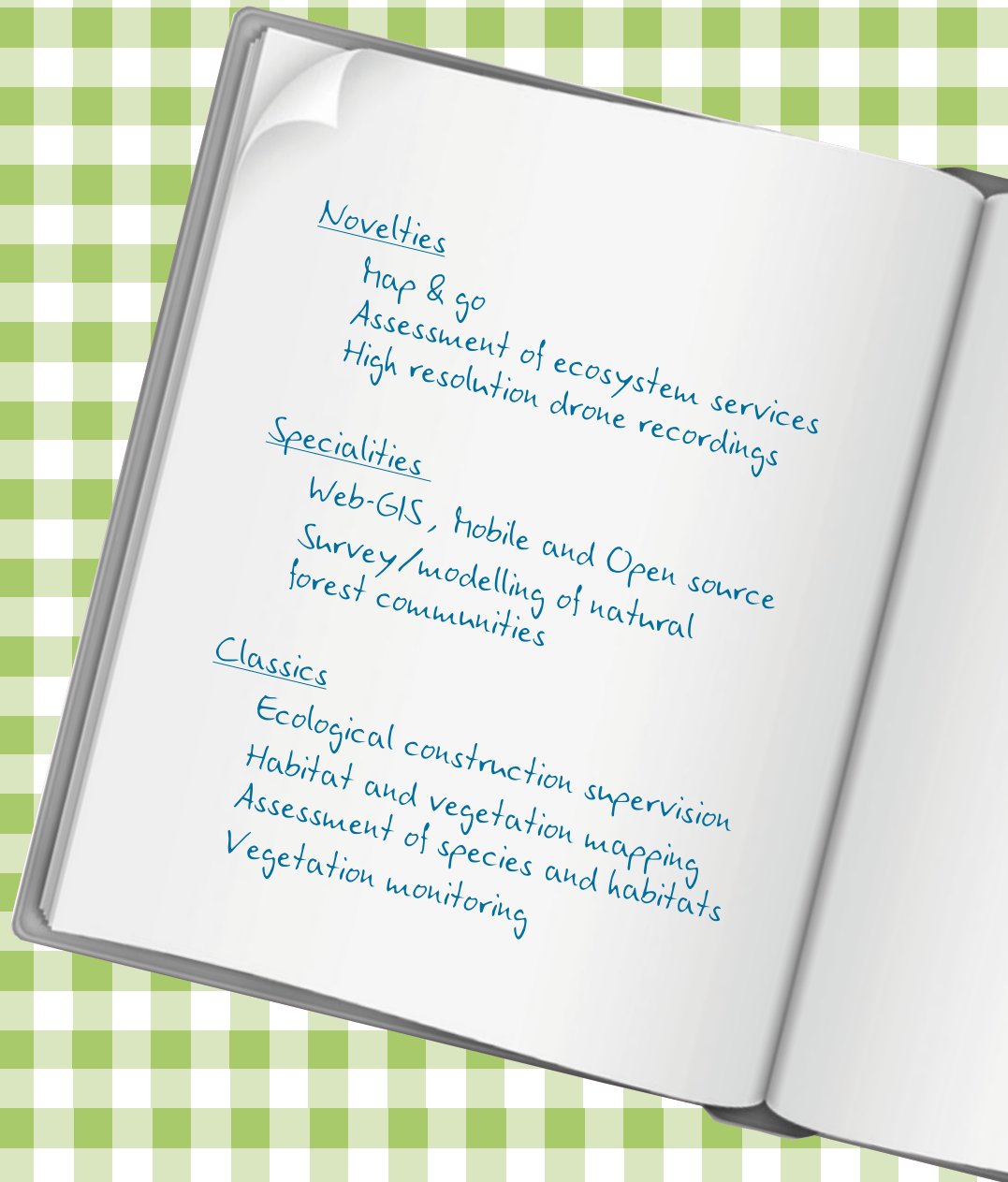
Austrian Biodiversity Strategy, the results of the evaluation of Austrian national parks and the results of the wilderness-certification have to be taken into account.

The plan is elaborated by editing various materials and through an accompanying discussion process. The main tasks of the park, nature, visitors and administration are structured and prepared with a view to perspectives, principles, goals, measures and indicators.

The final version of the national park plan follows the corporate design of the national park, is supported by compact infographics and illustrated by high-quality images. It is divided into six major thematic plans and 15 more detailed (action) plans. Besides measures regarding natural landscapes and visitors, it comprises elaborations and illustrations of the tasks of the overall organisation, for example regarding brand development, partner organisations, knowledge and data management, organisational development and operational procedures.

Title:	Management Plan Kalkalpen National Park: Final coordination, Support, Editorial, Finalisation
Client:	Kalkalpen National Park
Area:	Upper Austria
Category:	National Park
Project lead:	Michael Jungmeier

INFORMATION



Novelties

Map & go
Assessment of ecosystem services
High resolution drone recordings

Specialities

Web-GIS, Mobile and Open source
Survey/modelling of natural
forest communities

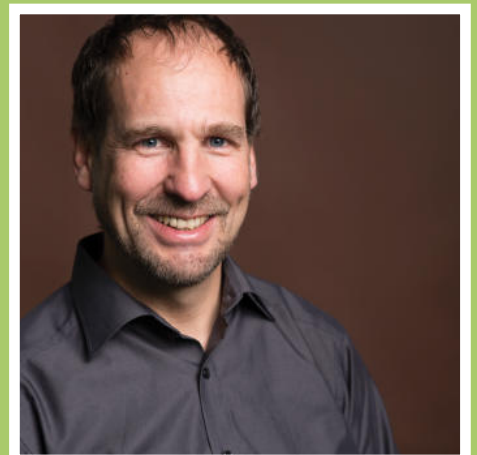
Classics

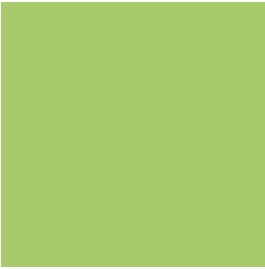
Ecological construction supervision
Habitat and vegetation mapping
Assessment of species and habitats
Vegetation monitoring

Department: NATURE

Survey, evaluation and planning of natural environments

*Hanns Kirchmeir
Head of Department*





Ecological Construction Supervision Turracher Höhe

Initial situation: The skiing region Turracher Höhe is planning a considerable expansion of its facilities. In this sensitive natural landscape, the expansion of ski slopes and lift systems is in constant conflict with the interests of nature conservation. For this construction project, the operator has decided voluntarily to engage an ecological construction supervisor to ensure an optimisation of the construction measures beyond official requirements.

Because of its altitude, the Turracher Höhe is a “winter paradise with snow guarantee”; at the same time required construction measures affect a range of alpine species and ecosystems. Particularly significant in this regard are extensive moors, which hosts for example good stocks of dwarf birches (*Betula nana*). E.C.O. has voluntarily been engaged by the operator as ecological construction supervisor and is responsible for

“Ecologically optimising unavoidable interventions”

helping the construction management to consider sensitive species and habitats whenever possible.

At a first on-site inspection, the problem areas are inspected and provisionally assessed. On this occasion, immediate measures are suggested and agreed upon together with the contractor. Additionally, good cooperation with responsible experts of the Federal State of Styria is required. The ecological construction supervision, organised on a long-term basis, provides a documentation of the initial situation, pinpointed recommendations for the implementation and expert monitoring of the measures taken. In this process, modern technologies like map & go or E.C.O.ptyryx are used. Particular attention is paid to the complex hydrology of the slope mires, the cautious transfer of vegetation units and the avoidance of collateral damage.

This detailed optimisation enables the conservation of sensitive species and habitats far beyond official requirements and regulations.

Title: Ecological Construction Supervision Turracher Höhe
Client: Bergbahnen Turracher Höhe GmbH
Area: Styria
Project lead: Michael Jungmeier, Daniel Zollner

INFORMATION

Long-term vegetation monitoring at the Ramsar-site Hörfeldmoor

Initial situation: The Hörfeldmoor, which was declared a nature reserve in 1984 and a Ramsar-site in 1996, is an extensive fen along the Hörfeldbach, a stream at the border between Styria and Carinthia (Oberes Görtschitztal). One of the requirements of the Ramsar Convention is a well-balanced management (“wise use”) of the protected area. This should be ensured by monitoring.

A long-term monitoring at the Hörfeldmoor was established in 1996, i.e. 20 years ago, on the basis of a concept by E.C.O. After surveys conducted in 1996, 1997, 1998, 1999, 2004 and 2010, valuable data on the site is available. To continue this monitoring process, another survey is carried out in 2015/2016.

The monitoring programme is based on seven permanently installed and marked monitoring plots. This is where the spatial distribution of vegetation units, floristic inventories and an estimate

of indicator species are analysed in 12 subplots along a transect. Additionally, in some analysis phases, current aerial photographs were taken to ease the interpretation of changes in the landscape and its usage in the area. After very complex tests using a zeppelin, a small aircraft and a helicopter, E.C.O.

for the first time employed the nature conservation drone E.C.O.ptyryx for this analysis. This method allows for high-resolution aerial photographs of excellent quality.

In addition, land-uses, touristic uses and nutrient input are documented and used for the time series analysis. The cartographic time series analysis reveals the dynamic development of complex vegetation patterns and mosaics.

“A fen in
the course of
time“



Title:	Monitoring Hörfeldmoor – Continuation 2016
Client:	Office of the Federal Government of Carinthia
Area:	Carinthia
Category:	Natura 2000-Site
Project lead:	Tobias Köstl

INFORMATION



Research Project on using Drones for Vegetation Analysis

Initial situation: The use of drone technology in nature conservation raises many scientific and technical, but also legal, economic and practical questions. E.C.O. is addressing these questions in a large FFG-project as well as a series of smaller undertakings. First results underline the large area of application of this technology and suggest that this is only the beginning of a major development.

Supported by a research project, E.C.O. has developed a new range of services using the hexacopter E.C.O.ptyryx in the last two years. The flying camera carrier opens new possibilities to support site surveys. Thus, E.C.O. is capable of generating its own basic data for maps, at any time and of first-rate quality. The drone facilitates work in difficult and inaccessible areas or in biotopes, where orientation is hard (e.g. extensive reed stocks). The resulting images can be georeferenced, stitched and equalised. Through waypoint-flights, even larger survey sites can

be entirely captured by aerial photographs. The possibility to carry out and repeat such flights at any time enables new analyses. The high-resolution aerial photographs open a completely new perspective on vegetation and – in the case of time series – on vegetation dynamics.

The drone that was officially approved by the Austrian aviation authority Austro Control in 2014 has already been successfully used in

numerous projects. For example, it was employed for a nature process monitoring in the National Park Gesäuse, for documenting the implementation of measures in diverse ecological construction supervisions, for the generation of ortho-photographs as a basis for field mapping at the Ramsar-site Hörfeldmoor and the Natura 2000-

“New perspectives in nature conservation“

site Lendspitz-Maiernigg or for the creation of attractive landscape panoramas in the national parks Hohe Tauern and Kalkalpen. Besides oblique and vertical aerial photographs, the range of services now also includes the generation of ortho-photographs and 3D-models. The agenda for the continuation of the project furthermore involves the optimisation of the entire process from flight planning up to the evaluation of the data.

Title:	Modern Nature Conservation Monitoring through Unmanned Aerial Vehicles (UAV)
Area:	Protected areas all over Austria
Financing:	FFG
Project lead:	Hanns Kirchmeir

INFORMATION

Integrated Erosion Control in South Caucasus

Initial situation: In the mountainous regions of South Caucasus, overgrazing and overuse of the alpine pastures increasingly represent existential problems. The negative effects of overuse and degradation are aggravated through climate change. The protection of biodiversity and forests as well as the development of sustainable land use practices for erosion control are therefore the focus of international development cooperation in Southern Caucasus (Armenia, Azerbaijan, Georgia).

For three years now, E.C.O. and AHT have been working to develop and implement sustainable solutions under the administration of the German ECO-Consult. Three project offices in Georgia, Armenia and Azerbaijan accompany and coordinate the implementation on-site. E.C.O. actively supports this project and has been very proactive in the last year: in the province of Aragatsohn in Armenia, large-scale afforestation measures were jointly planned, implemented and accompanied. During these afforestation works, a delegation of the Austrian Development Cooperation visited the area in 2015 to get an impression of the project's progress.

“Experience from the Alpine region“

Since 2015, E.C.O. has been coordinating and accompanying the development and realisation of a GIS-assisted model for erosion risk recognition. This model is based on an instrument developed for Armenia, which is now also adapted for use in Georgia and Azerbaijan as part of the project. In cooperation with the BOKU,

a training seminar for planning and implementing bioengineering measures was held in Georgia in April 2016. This training constitutes the basis for the implementation of a whole series of measures to be taken in the area of the Tusheti Protected Landscape. These will be implemented together with local NGOs and the local population from June 2016 onwards.

In addition, E.C.O. is continually accompanying measures for the improvement of pasture management in the project areas, coordinating supporting vegetation surveys and monitoring activities as well as offering technical support for the local project team on-site.



Title: Integrated Erosion Protection in South Caucasus
Client: GIZ und Austrian Development Agency (ADA)
Cooperation: ECO Consulting Group, AHT Group
Areas: Armenia, Azerbaijan, Georgia
Project lead: Hanns Kirchmeir

INFORMATION

Novelties

Corporate Publishing
Exhibition design

Specialities

Print and transfer products
Cartography
Visitor infrastructure

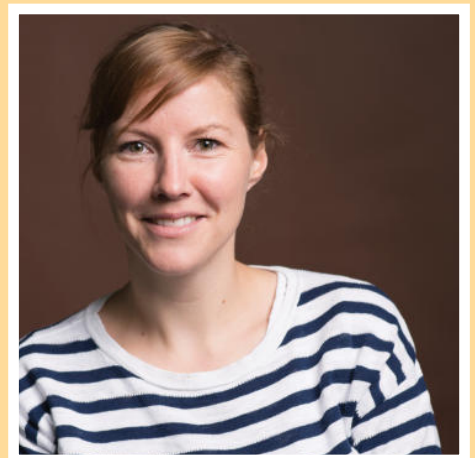
Classics

Visitor information concepts
Visitor management
Infopoints
Theme trails

Department: COMMUNICATION

Innovative transfer of scientific and nature-related knowledge

Elisabeth Kreimer
Head of Department



Exhibition Wildlife-Landscape-Habitat, Concept and Implementation

Initial situation: Biosphere reserves are science-based model regions where knowledge and nature mediation and the sensibilisation of visitors to the world of plants and animals and issues relating to nature conservation are of great importance. Beside nature-pedagogical outdoor activities such as excursions and guided tours, the biosphere reserve in the Carinthian Nockberge offers interactive and informative indoor education activities, info centres and info events. The “Marmot-Exhibition”, installed in the Pfandlhütte at the Nockalmstraße, is supplemented by a new exhibition which meets the latest pedagogic, didactic and design-related requirements.

On the occasion of a competition, a team around E.C.O. was commissioned to manage the redesign of the exhibition in Pfandlhütte. The exhibition is dedicated to the topic of “Wildlife – Landscape – Habitat”. A number of informative, interactive and multimedia stations show common and less known wild animals in their habitat, the diverse landscapes of

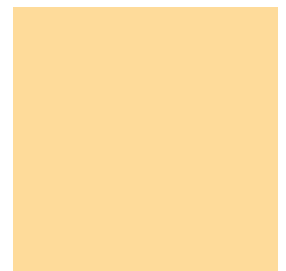
the Nockberge as well as the field of conflict between animal and human. The conceptualisation and implementation of the exhibition is conducted by E.C.O. in cooperation with international partners. Dr. Wolf Schröder, Professor for wildlife biology at the University of Munich, brings in his expertise and specialist knowledge for the elaboration of the contents.

The pedagogical and technical aspects as well as the design are elaborated together with the exhibition and museum planning company VERDANDI GmbH.

Preparation works, choice of the topic and the development of central ideas are carried out in close

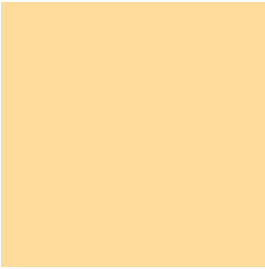
cooperation with the management of the biosphere reserve and the local stakeholders and decision-makers. The exhibition will be opened on the occasion of the season start of Nockalmstraße in July 2016.

“Exciting presentation of wild animals and their habitats“



Title:	Exhibition “Wildlife – Landscape – Habitat” Nockberge – Conceptualisation and Implementation
Client:	Association Development Biosphere Reserve Nockberge
Area:	Carinthia
Category:	Biosphere Reserve
Project lead:	Elisabeth Kreimer

INFORMATION



Nature Interpretation in the Nature- and Geopark Steirische Eisenwurzen

Initial situation: The nature park was founded in 1996. Currently, the management is working towards a focused advancement of the knowledge transfer. Expert knowledge on outstanding natural features in the Nature- and Geopark Eisenwurzen is currently presented in the form of various infopoints and display boards that greatly differ technically, graphically and in terms of presented content. A new communication design is

intended to advance knowledge transfer, awareness raising and visitor guidance.

The Nature- and Geopark Steirische Eisenwurzen has commissioned E.C.O. to develop a corporate design and to collate in-depth information of four preselected sites. Besides characteristics regarding nature conservation and the landscapes, the aim is to also provide information on biological diversity and existing

risk potentials (e.g. neophytes) in an appealing and target-group-specific way. The basis for this are results from an extensive literature research on these subjects, which are added to existing GIS-data (e.g. biotope surveys, vegetation records, diverse mappings). Moreover, recommendations for detailed surveys and mappings are made.

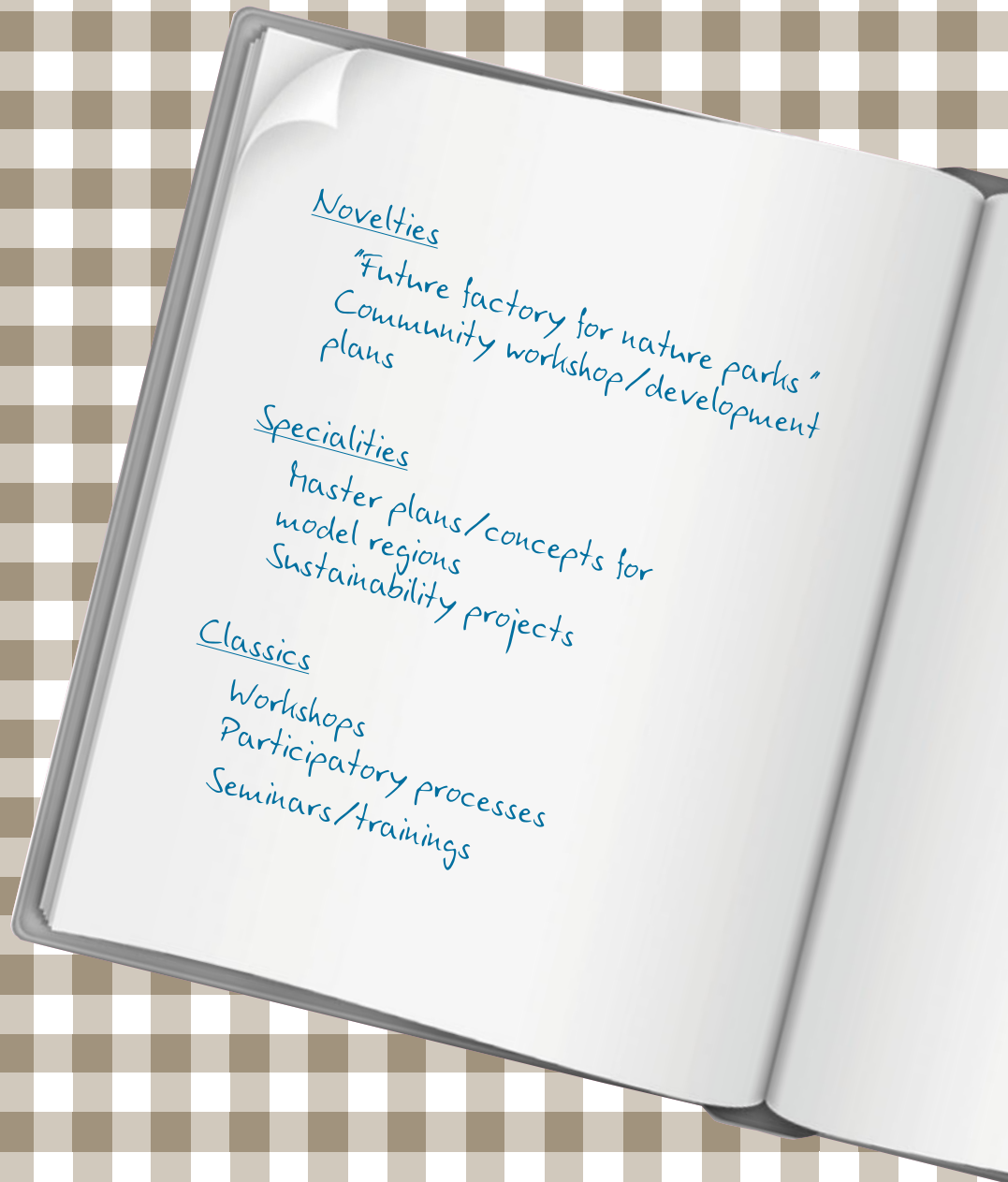
The second work package focuses on the development of a corporate design that reflects the image of the certified region. In a participatory process, E.C.O. collaborates with authorities from the nature park to identify the key messages of the region. This results in a region-specific corporate design which, besides colours and fonts, also defines the logo and promotional materials. In future,

this design will shape the appearance of all infopoints, print and media products and thus enhance the recognition value of the park for locals and visitors.

“Content needs form“

Title:	Nature Conservation Knowledge Transfer in the Nature- and Geopark Steirische Eisenwurzen
Client:	Nature- und Geopark Steirische Eisenwurzen
Area:	Styria
Category:	Nature Park
Project lead:	Elisabeth Kreimer

INFORMATION



Department: SUSTAINABILITY

Participatory development of regions and organizations

Daniel Zollner
Head of Department





Concept for Protected Area Management in Lower Austria

Initial situation: Lower Austria has more than 180 protected areas and about 1,400 natural monuments. The task is to examine and systematically built up and advance the previous management structure of the sites in order to elaborate a concept for province-wide, coordinated protected area management concept.

The Energy and Environment Agency of Lower Austria (ENU),

in close cooperation with the Lower Austrian Federal Government, is developing a project for the advancement of protected area management in Lower Austria. E.C.O. is entrusted with supporting this project and is in charge of compiling the content and the technical

and conceptual cornerstones of the proposal to be submitted. The basis for this task is E.C.O.'s experience in a national and international context.

First, materials and information for protected area management are collected from other Federal States and the specialist requirements of this kind of site management are identified. The

organisation of the management is planned and structures and processes are documented in an organisation manual. Time expenditure and costs of the management of the area are calculated, priority measures are worked out and the involvement of relevant stakeholders is ensured.

The project is prepared in a series of events and workshops. All jointly achieved results are processed by E.C.O. and a concept of the project to be submitted is drafted. The responsibility for the actual submission is taken by the ENU, while E.C.O. has an advisory and supporting function.

“Finding a common direction“

Title:	Protected Area Governance & Maintenance in Lower Austria – Pilot Study for Project Development and Conception
Client:	Energy and Environment Agency of Lower Austria
Area:	Lower Austria
Project lead:	Daniel Zollner, Michael Jungmeier

INFORMATION



Ecological Hydropower Development Bhutan, Analysis of Residual Water Sections

Initial situation: Within the framework of the national development strategy of the Kingdom of Bhutan, the use of hydropower is to be expanded; on the one hand, the country's energy supply is increasingly oriented towards renewable energies; on the one hand, electricity is intended to become an important export good. The National Environment Commission of Bhutan therefore requires instruments and knowledge to ecologically assess hydropower usage and develop it in an ecologically viable way. In this context, the definition of minimum residual water amounts plays a key role.

Based on an international competition, E.C.O. was engaged as consortium leader of the National Environment Commission Secretariat of the Royal Government of Bhutan to formulate guidelines for the determination of residual water amounts, conduct field studies regarding the impacts of different residual water amounts on selected river reaches and equip local experts with necessary know-how.

Partners in this project are various European experts and a local partner on-site. The internationally experienced agricultural engineer Dr. Klaus Jorde leads the project; E.C.O., as a consortium leader, has the primary responsibility

for the assessment of sociocultural effects caused by different residual water amounts.

To develop the commissioned guidelines and methods for the assessment of the residual water amounts, the selection of appropriate pilot reaches is necessary.

This is done on the occasion of a site visit of representatives of this consortium, during which several meetings with stakeholders and experts take place and selected river reaches are visited. This will result in the selection of reaches to be examined.

Along the chosen pilot reaches, experts carry out hydromorphological, hydrogeological, ecological but also socioeconomic studies, which provide the basis for nation-wide guidelines for the determination of ecologically viable residual water amounts. The national guideline is worked out step by step. Experts from the National Environment Commission are involved in the elaboration process and trained so that a transparent and environmentally friendly thresholds of residual water amounts can be ensured for future construction projects.

“Sustainable hydropower use in the Himalayas“

Title:	Sustainable Hydropower Usage in Bhutan: National Guidelines for Ecological Residual Water
Client:	National Environment Commission Secretariat
Area:	Bhutan
Project lead:	Klaus Jorde, Michael Jungmeier

INFORMATION



Strategy Process Nature and Geopark Steirische Eisenwurzen

Initial situation: 2015 marks the beginning of a new EU programme period and thus the reorganisation of the European funds for rural development, nature conservation, cooperation, research and innovation. This is why it is important to readjust the strategic orientation of a region, develop impulse-giving flagship projects and prepare their implementation.

The nature and geopark Steirische Eisenwurzen is systematically preparing for the current programme period and is supported by E.C.O. in this process. This involves considering the European programme architect-

ture and the regional demand, which is done on the basis of existing project ideas and drafts that were collected and processed in a regional discussion. The result is a strategy document summarising the most important measures in the fields of nature conservation, recreation, tourism, environmental education and regional development. Five key projects are then selected and operationalised together with regional stakeholders, who are invited to actively participate in this process.

“The objective defines the way“

Besides general consultation and process support, E.C.O. in this context also provides expert coaching and an analysis of the initial situation. The tool applied for this is the nature park barometer specially developed by E.C.O. The results of this project are then prepared for presentation and comprehensively documented.

Title:	Nature and Geopark Steirische Eisenwurzen: Strategic Orientation and Implementations 2015-2020
Client:	Nature and Geopark Steirische Eisenwurzen
Area:	Styria
Category:	Nature park
Project lead:	Daniel Zollner

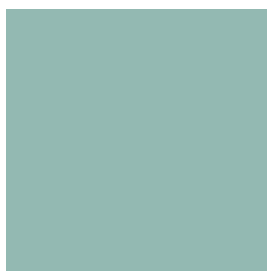
INFORMATION



Department: Education and Training

*Michael Jungmeier,
Head of Department*





Flora Velden – Science for kids in the Teufelsgraben

Enthusiasm for scientific work can already be encouraged at primary school level and in early secondary education. The International School in Velden therefore wants to give their students the opportunity to take part in a “dynamic learning experiment“ and prepare them for the future with “21st century teaching offers“. In this context, project and competence-oriented learning formats and interdisciplinary activities play an important role.

Together with E.C.O., the ISC team has conceptualised a six-week project on the topic of biodiversity, growth and development in biology. A constitutive element of this workshop is the research project in the Teufelsgraben. This gorge section, located in immediate walking distance from the school, has an unspoilt stream course, mixed forest with a high proportion of

deciduous tree species and an interesting range of species ideally suited for science with kids.

47 pupils from the first and fifth grade get to know the most important plant species in the Teufelsgraben. In small groups, they search for the various species and do drawings of the plants. The species are revised in a biodiversity quiz, which helps children memorise German and English plant terms. The children further investigate the distribution of the plants in the area with the help of counting frames and transects. The development of trees, from seedling to fully grown tree, is studied through measurements performed on various old trees. For this purpose, callipers and core drills are employed.

All results are recorded and processed. The work is also documented photographically. At a final presentation, parents and pupils get an impression of the overall research results. Thus, at future walks through the Teufelsgraben, the children will see this stream section with different eyes.

Title:	Flora Velden – Pre-Scientific Research in the Teufelsgraben
Client:	International School Carinthia, Velden
Area:	Teufelsgraben, Velden
Project lead:	Christina Pichler-Koban

INFORMATION

Certificate Course Nature Conservation Technician – Cooperation with the Carinthia University of Applied Sciences

At the interface between nature conservation and technology, numerous new task areas and professional fields are emerging. These require specific competences. The training as Certified Nature Conservation Technician is unique in Austria.

Graduates of this course are qualified to independently prepare, practically implement and evaluate nature protection measures in the construction and mining industry as well as in agriculture, forestry and the water sector, in traffic management (roads, trams) and public infrastructure.

The part-time course is aimed at participants interested in natural science and technology who are or wish to be working in the field of applied nature conservation.

The certificate is conceptualised as an additional qualification to an existing profession. The training comprises an introductory module (e.g. nature conservation biology, nature conservation tasks, nature conservation law, nature conservation jobs, etc.), equipment and technological training (e.g. camera traps, telemetry, drones, bat detectors, soil drilling

machines, special hard- and software etc.) as well as a main module on practical nature conservation. In this part of the training, central competences in the field and on the object are taught and practiced. Nature conservation specialists are needed whenever technology touches nature.

The nature conservation specialist learns to take and systematically document appropriate measures based on state-of-the-art-technology. Learning to recognise and deal with animal and plant species and habitats relevant for nature conservation is a central learning content.

The first certificate course for nature conservation specialists will start in spring 2017. Registrations are possible until the end of November 2016. It is required to complete 40 course units of one and a half day each. Entry requirements are a completed bachelor's degree, a Matura (school-leaving-certificate) plus four years of relevant professional experience or a relevant apprenticeship plus four years of relevant professional experience.

The certificate course is offered by the University of Applied Sciences Carinthia in cooperation with E.C.O. Institute for Ecology.





E. P. A. European Parks' Academy

Initiated by the International Union for Conservation of Nature (IUCN), the Summer Academy "European Parks' Academy" (EPA) will take place first-time in Austria next year, more specifically at the Lakeside Campus in Klagenfurt. As the organiser of EPA, E.C.O. is supported by the Ministry for a livable Austria.

EPA offers persons in charge of and experts for protected areas the opportunity of intercultural learning and the unique possibility to learn about latest developments, current topics, approaches and technologies in nature conservation. Internationally renowned experts from universities, organisations and the private sector act as lecturers in the two seminars. The selected key topics are taught interactively and elaborated together with the students. International best-practise examples additionally serve to illustrate the taught contents.

The training programme is offered in collaboration with the World Commission on Protected Areas (WCPA) and several Austrian educational institutions, among them the Technical University of Vienna and the University College for Agrarian and Environmental Pedagogy in Vienna.

Please find further information online:
www.e-c-o.at/european-parks-academy.html

Seminar 2017-1

Effective Financial Management of Protected Areas

Date: 10-15 July

The seminar provides strategies and tools to increase incomes, improve financial flows and optimise expenses. The participants will be enabled to analyse the situation of their parks, identify improvements and sketch realistic plans for concrete steps. Principles of financing, financial planning and controlling as well as new tools such as crowd funding are presented in the practical context of a park. The show cases, as brought in by each participant, provide the frame for the application of particular tools and techniques.

Seminar 2017-2

New Challenges in the Governance of Protected Areas

Date: 17-22 July

The seminar focuses on meeting the challenge of governance of protected areas and its implications, benefits and challenges for individual protected areas. It provides strategies and practical tools to optimise the governance of protected areas and to meet the challenge of migration and refugees. Furthermore, it focuses on old and new ways of designing public involvement (e.g. Citizen Science) and decision-making processes. The participants will be enabled to analyse the situation of their parks and to develop concrete measures and plans for implementation.

TEACHING-15/16: Scientific and pre-scientific training

Lecture course: Earth's Vegetation

Content: Terrestrial ecosystems are primarily characterised by their vegetation, with plants reflecting the dominant conditions of a particular site. From a global perspective, the general climate conditions play a formative role in this context. Based on the spatial structuring of the earth into zoniomes (Walter 1999), the major ecosystems are characterised according to their vegetation and decisive location factors.

Where: Department of Geography and Regional Research, Alpen-Adria-University Klagenfurt

Lecturer: Dr. Hanns Kirchmeir

Seminar: Elective Module Sustainable Development

Content: Dilemmas, aporias and possible solutions for current issues related to sustainable development; analysis of the viability of theoretical concepts and methods in practical applications of interdisciplinary work; sequential modules in the summer and winter term: attendance of this course is required to obtain the sustainability certificate of Alpen-Adria-University; the course focuses on the field of practice of EMAS at the AAU.

Where: Department of Organization Development, Group Dynamics and Intervention Research, The Faculty for Interdisciplinary Research and Continuing Education, Alpen-Adria-University

Lecturers: Directing team with Ass.Prof Dr. Renate Hübner, Univ.-Prof. Dr. Franz Rauch, Univ. Prof. Dr. Wilfried Elmenreich and Dr. Michael Jungmeier as well as lecturers from various faculties and disciplines.

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

Content: Introduction to the foundations, principles and methods of project management;

application of competences using practical examples

Where: Department of Vegetation Ecology and Conservation Research; University of Vienna

Lecturer: Dr. Michael Jungmeier

Seminar: Project Study Geography

Content: Based on a mapping project, an entire project cycle is practically implemented. From the first "customer meeting" over the creation of an offer and its presentation, the implementation of the mapping task

up to reporting and presenting the results, these courses cover an entire project cycle. Besides practical training, students are familiarised with the relevant theoretical foundations.

Where: Department of Geography and Regional Research, Alpen-Adria-University

Lecturer: Univ.-Prof. Dr. Heike Egner, Dr. Hanns Kirchmeir

Summer Academy: Socio-ecological Aspects of Protected Area Planning

Content: This one-week course consists of practical and theoretical sessions on the social, landscape planning-related and ecological aspects of protected area planning.

Where: IAMZ Mediterranean Agronomic Institute of Zaragoza, Spanien

Lecturer: Dr. Michael Jungmeier, DI Michael Huber, Experts of IUCN

By offering seminars and workshops, E.C.O. supports teachers and students with the development and operationalisation of pre-scientific projects.



What. When. Where.

Events throughout the year.

1.6.2015: Voluntary work. Tobias is appointed nature conservation referee of the Austrian Alpine Association's section for Millstatt. A clear separation between work and voluntary commitments is important for him.



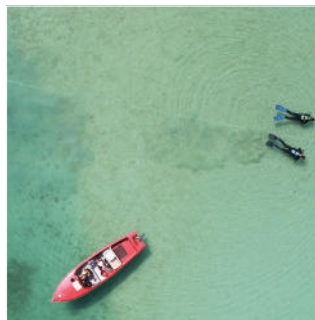
13.6.2015: Diversity Day. Within 24 hours, scientists verify 1,000 (!) animal and plant species. Amongst others, nine bat species, 46 aquatic beetle species and 230 butterfly species are documented.



24.6.2015: Ecology meeting. Canopy minus spreading of heathland minus petrification – how much forage area is that? This question is the subject of heated debates all over Austria. Norbert Kerschbaumer (land.plan office) explains the problem using the example of a mountain pasture on the Hochrindl.



22.7.2015: Diving in the Maldives? Not quite – here, experts are examining the underwater world around the European protected area Lendspitz-Maiernigg.



23.7.2015: Bee eater. This rare bird has chosen a spot amidst the construction site at Koralmbahn as breeding place. Hanns is examining the conditions on site.



5.8.2015: Band on a tram. The presentation of the book "Naturschutz*Werte*Wandel" ("Nature Conservation*Values*Change") is celebrated with a tram-ride and music from the band "Die Unvollendeten".



15.8.2015: We're here by bike. At the competition "cycle to work", Anna, Corinna and Tobi win a price because they cycle to work every day. This is ecological, sporty and convenient.



19.9.2015: Rock arches of Uschowa. This office excursion leads us and our families to the Geopark Karawanken, where we take a guided tour to discover karst formations, fossils and the Peredriatic Seam.



7.10.2015: Opening of B11. At the opening of the new building in Lakeside Park, E.C.O. presents itself with an analogue ticker.



19.11.2015: Network beech forest. The late autumn forest of the island Vilm near Stralsund offers the perfect scenery for the meeting auf European beech forest experts.



22.11.2015: Golden Buddha. The extraordinary country in the Himalayas is looking for an independent way of life between contemplation, tradition and innovation. The project E-Flows has led Michl, here together with international experts, to this country.



18.12.2015: Year after year. The Monastery of Wernberg is the location for our Christmas party 2015, contemplation, culinary highlights and torch-lit hike included.



30.1.2016: Off to Paris. Anna and Hanns are presenting the dossier to be submitted for the world heritage beech forest. A few minutes later, the proposal is carefully packaged and sent to UNESCO for consideration.



20.2.2016: Mike meets Lucy. Within a cooperation project about Urban Protected Areas, Mike visits Ethiopia and is confronted with the origins of humanity there.



15.3.2016: Sommeliers gone astray. Why a tasting of "Great Wines of Protected Areas" leads us to the magnificent roof landscape of Lakeside Park, is not revealed here.



22.3.2016: Mount Aragats. On skis, Hanna, Hanns and Topi are mounting the extinct stratovolcano northwest of Yerevan; due to the weather, the adventure ends just before reaching the peak.



8.4.2016: Graduation. On the occasion of being awarded a doctoral degree by the University of Natural Resources and Life Sciences, Christina holds a much-noticed speech on scientists as dwarfs on the shoulders of giants.



22.4.2016: Long Night of Research. Some hundreds of visitors inside all ages get an insight into our research and discover on a nightwalk, what crawls and flies in the Lendspitz Area.



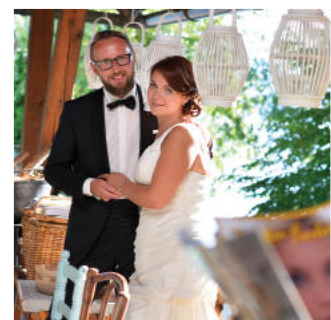
17.5.2016: Photo shooting I. Regional Minister Rolf Holub, Minister of the Environment Johannes Rimmel (NRW) and a Desmoulin's whorl snail (Vertigo moulinsiana) are posing for the photographer.



17.5.2016: Photo shooting II. Photographer of our confidence Helge Bauer, puts the spotlight on the team of E.C.O.



10.6.2016: Marriage. Caro (formerly Stuchetz) has married her Werner and we celebrated with them. From now on, emails should be sent to Mrs. Fiedler.







We are accompanying the project of establishing the European beech forest, stretching over 13 countries, as the historically largest world heritage site.



Further reading

Selected publications

GLATZ-JORDE, S., JUNGMEIER, M. & EGNER, H. (2015): City meets Nature: Betreuung des Europaschutzgebietes Lendspitz-Maiernigg – Aktivitäten 2012–2015. In: Natur – Vielfalt. Klagenfurt, 14–19.

HUBER, M. & ARNBERGER, A. (2015): Opponents, waverers or supporters: the influence of place-attachment dimensions on local residents' acceptance of a planned biosphere reserve in Austria, *Journal of Environmental Planning and Management*, DOI: 10.1080/09640568.2015.1083415.

JUNGMEIER, M. (2016): „Influential ideas are rarely unchallenged“ – an interdisciplinary tribute to Ester Boserup's legacy on sustainability. In: *eco.mont*. Wien, 68–69.

JUNGMEIER, M. (2015): Schutzgebietsbetreuung – Aufgaben, Ziele und Modelle. In *Kuratorium Wald*, 2015. Wien, 93–96.

JUNGMEIER, M., KIRCHMEIR, H., HECKE, C. & KREINER, D. (2015): Naturprozesse in einem Lawinarsystem – das Beispiel Kalktal im Nationalpark Gesäuse (Ennstaler Alpen, Tamischbachturm). In: *Mitteilungen des Naturwissenschaftlichen Vereines für Steiermark*, Bd. 145, Graz, 15–29.

JUNGMEIER, M., KIRCHMEIR, H. & KOVAROVICS, A. (2015): Waldschutzgebiete – eine internationale Perspektive. In: Maringer, A., Kreiner, D. (Red.) (2015): *Ur-, Natur-, Nutz-Wald – Forschung in Nationalparks – Schriften des Nationalparks Gesäuse*, Band 12. Weng im Gesäuse, 16–25.

KOVAROVICS, A. & JUNGMEIER, M. (2016): Qualität von Themenwegen in Schutzgebieten am Beispiel Österreichs – Status quo und Perspektiven. In: *Naturschutz und Landschaftsplanung*, Band 48. Ludwigsburg, 80–86.

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SCHRANK, J., OLBRICH, G., KIRCHMEIR, H., & HUBER, M. (2015): *Natura 2000 und Wald. Handbuch und Fachbeiträge zur Umsetzung des europäischen Schutzgebietsnetzwerks Natura 2000 in Österreichs Wäldern*. Wien.

ZOLLNER, D., UNGLAUB, R. & JUNGMEIER, M. (2016): Alpenkonvention und Alpenstädte – eine Allianz mit Perspektive? Die Alpenkonvention als Grundlage des Umweltkonzepts der Stadt Klagenfurt. In: *zoll+ Österreichische Schriftenreihe für Landschaft und Freiraum*. Nummer 28/2016. Wien, 68–71.



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