Report
2011-2012

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Centre for Econics and Ecosystem Management

HNE Eberswalde
Hochschule für nachhaltige Entwicklung (FH)
Eberswalde University for Sustainable Development
University of Applied Sciences

Writtle College
A partner of the University of Essex

Katunskiy Biosphere Reserve in Altai Republic, Russia, part of the planned Transboundary Altai Biosphere Reserve
Slope above Lake Multa, affected by a forest fire about four decades ago

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Reserva Comunal El Sira, Peru. A conservation site supported by the GIZ, where the centre's MARISCO methodology was applied and further developed.

A. Overview

The Centre for Econics and Ecosystem Management was founded in June 2011 by the co-directors Pierre Ibisch, Prof. for Nature Conservation, HNEE and Peter Hobson, principal lecturer of conservation management with Writtle College, United Kingdom. The aim of the Centre is to develop international recognition for research and applied scholarly activities in the field of conservation through collaboration between the two parent institutes and with sector organisations. The philosophy underpinning the activities of the centre is based on the principles of "econics" and is best described as the promotion of sustainable ecosystem-based management of natural resources by applying ecosystem theory and principles of non-equilibrium thermodynamics.

The principal objectives of the centre are to:

1. Carry out applied and pure research about econics and ecosystem management
2. Deliver high-quality teaching informed by original research and curriculum development
3. Provide career opportunities for students and alumni
4. Contribute to the profile, prestige, visibility and internationalization of both higher education institutes.

The centre was established as a result of the first research professorship awarded to Prof. Ibisch ("Biodiversity and natural resource management under global change") as well as consequence of an intensive long-term collaboration with Writtle College, UK. A second term of the research professorship also made possible the involvement of Peter Hobson in the delivery of a substantial proportion of *Global Change Management* (M.Sc.) and *International Forest Ecosystem Management* (B.Sc.) at Eberswalde university. This arrangement has improved the opportunities for closer collaborative activities between both directors.

The centre directors, Pierre Ibisch and Peter Hobson, in Sierra del Lacandón National Park, Guatemala (March 2012).

B. Accomplishment of objectives since the foundation of the Centre

Carry out applied and theoretical research about econics and ecosystem management

Since the launch of the centre in 2011 significant progress has been made towards **defining and establishing the concept and application of econics.** Evidence of our activities include publications (e.g., Hobson & Ibisch 2012, Ibisch in press), a collaborative research proposal about the establishment of econics as an emerging field in Germany, submitted to VW Foundation together with colleagues from TU Berlin, Universities of Freiburg and Kiel, and.

New projects have been launched that provide further opportunities for applied research. These are related to the preparation of nomination documents for a UNESCO Transboundary Biosphere Reserve in Altai Mountains and the further development of a European network of World Heritage Beech Forests (both for BfN – German Federal Agency for Nature Conservation).

A couple of **ongoing projects were accomplished or progressed.** Among these was a German government contract targeting the adaptation of nature conservation in Brandenburg (as part of INKA-BB, BMBF). Another contract included the integration of risk management in a pre-REDD project in Guatemala (for OroVerde and the Fundación Defensores de la Naturaleza).

More recently, the GIZ, Germany, contracted us to carry out **applied research** to further develop our MARISCO methodology, the adaptive management of risk and vulnerability at conservation sites.

A number of **high-profile publications** were achieved this year based on the existing PhD programme of research. The joint **supervision and support of doctoral candidates, specifically** Lisa Freudenberger (Dr. candidate,Cooperative Doctorate Programme with University of Potsdam) and Catherine Norris (a Writtle College Dr. Candidate registered at Essex University in the final phase of thesis) were particularly productive in this field.

The centre **research portfolio** has grown rapidly in these past twelve months with the submission of a number of project proposals to various funding agencies or donors (e.g., related to scientific support of a 'Transparent Forestry Enterprise in Brandenburg', together with NABU, Landesforstverwaltung Brandenburg and University of Göttingen; and another one with , and the UK Environment Agency). Our activities were also embedded in larger **international collaborative projects and initiatives**, e.g., the promotion of 'roadless areas' as conservation targets (Selva et al. 2011), and the issue of transboundary conservation. We see several other opportunities **arising with strong partners** such as the Society for Conservation Biology and Google, WWF, and The Nature Conservancy in Europe.

Centre representatives with partners from Defensores de la Naturaleza and OroVerde in Guatemala after accomplishing strategic workshop for the integration of risk management in forest conservation and protected area management (Sierra del Lacandón project - September 2012).

Old-growth forest research in the Carpathian Biosphere Reserve, Ukraine. The Uholka forest is part of the UNESCO World Heritage Site "Primeval Beech Forests of the Carpathians and Ancient Beech Forests of Germany".

Centre for Econics and Ecosystem Management: Research portfolio

The research profile for the Centre for Econics and Ecosystem Management is made up of a collection of independent and joint staff scholarly activities that unite under several related main thematic disciplines. The discipline of 'econics' is developed as an umbrella approach:

Econics: Establishing appropriate theoretical and conceptual platforms for sustainable development under global change with a specific focus on non-knowledge strategies

Econics has been proposed as a transdisciplinary approach to studying the dynamics and functioning of (complex and holarchically nested) ecological systems with the aim of deriving management solutions for natural resource-dependent socio-economic systems as a gateway towards sustainable development under global change.

Contemporary strategies for sustainable development and nature conservation planning emphasis the importance of applying evidence-based principles to practice. This approach relies on a number of assumptions including a certain level of predictability, determinism and dynamic equilibrium in the system. Aspects of uncertainty and chaos in natural systems coupled with human non-knowledge and ignorance are not always factored into the process. Staff at the Centre for Econics and Ecosystem Management is developing a theoretical platform for conservation planning and management that embraces natural dynamics and uncertainties inherent in nature as well as the emergent consequences of the various forms of human non-knowledge. New concepts are being explored that draw on complex systems theory and ecosystem theory. These ideas are emerging into a unifying concept of "econics" that has practical application in the form of ecosystem-based management of natural resources (which also embraces ecosystem-base adaptation of global change). We concretely work on the application of econics to biodiversity conservation and forest ecosystem management.

More specific thematic areas of research, which are developed under the approach of econics, are the following:

Conservation management planning for landscapes and conservation sites, and adaptive management under global change.

Human-induced factors that contribute to climate change together with land use practices are considered to be the main drivers of biodiversity loss and change. Over the last years, staff at the centre has been working on conservation planning projects for protected areas in Central America, Peru, China as well as Europe and central Asia. The practical component of this work has involved the development and application of MARISCO, a conservation management planning process that integrates risk and vulnerability management. It has been derived from CMP's Open Standards for the Practice of Conservation.

A complementary element of this process that is still in the early stages of development is "landscape forensics", a rapid assessment of complex conservation situations, which combines information from any sources, including spatial analysis (e.g., of Google Earth images), cartographic evidence and ground-truthing landscape surveys.

The development of environmental indices strives to provide input for planning and priority-setting in conservation management and general sustainability-related policy advice.

A special field of applied action research is related to transboundary conservation management.

Applying principles and theories of non-equilibrium thermodynamics and complex systems to global ecosystems and landscapes

The composition and function of ecosystems is too complex to represent or describe using conventional ecological concepts and methods of investigation. Scientists use relatively simple laws of physics such as relativity and thermodynamics to explain natural phenomena. However, this is only recently reached the domain of ecologists and conservation scientists. Staff at the Centre for Econics and Ecosystem Management is working on quantifiable measures of ´non-equilibrium thermodynamics' to assess aspects of ecosystem function, in particular, ecosystem resilience, at multiple scales. Examples of research carried out include microclimatic and vegetation functional analysis in a range of European landscapes; and the use of spatial metadata and global indices to generate proxy indicators of ecosystem function. These findings are then being applied to conservation planning and sustainable management of landscapes.

Peter Hobson at workshop about European Beech Forest Network on the Isle of Vilm (October 2012) – now also teaching in Eberswalde programmes International Forest Ecosystem Management and Global Change Management.

Deliver high-quality teaching informed by original research and curriculum development

We have started the long and complex process of reviewing and refreshing the curriculum programme offered at both institutes, namely, **- *international Forest Ecosystem Management, Global Change Management***(Eberswalde University for Sustainable Development) and ***Conservation Management under Global Change***(Writtle College). In a smaller way desired changes and improvements have already begun with the revision of both lecture material and assignments that now have a stronger relevance to sector needs and skills. Where possible, we have been working in collaboration with conservation organizations to provide students with sector-relevant skills. We have actively included one of our study sites, the Sierra del Lacandón National Park and project in Guatemala in various modules, applying and teaching the adaptive management approaches, *MARISCO* and *Open Standards for the Practice of Conservation*. At Writtle College students have been working with the sector on various environmental education projects and also on site management plans for Natura 2000 sites, using ecosystem services assessment and open standards. We have run a MARISCO exercise with students and representatives from the conservation sector analysing the *Area of Outstanding Natural Beauty Suffolk Coast and Heaths*, East Anglia.

A **joint excursion** was organized in June 2012, **with a mixed group of German, British and other international students to the Carpathians** (Biosphere Reserve Management, IFEM / Natural resource

management in transformation countries, GCM / Conservation Management under Global Change). This is another example of how we strive for the integration of applied conservation research and teaching. For many years we have been working with our partners from the **Carpathian Biosphere Reserve in Ukraine** and recently, we included the **Ushansky National Park** into our programme. Both areas are well established as part of the serial UNESCO World Heritage Site 'Primeval Beech Forests of the Carpathians and the Ancient Beech Forests of Germany'. Additionally, we organized student excursions to the Grumsin component of the above-mentioned World Heritage Site in the Schorfheide-Chorin Biosphere Reserve, Germany. One of these excursions was offered as part of a meeting of the International Forestry Students Association (IFSA) in Eberswalde.

This year has produced a number of high quality undergraduate and postgraduate research projects from students at both institutes that included research topics related to projects in Germany, Guatemala, Peru, UK and Venezuela. Our project and research activities generated internship opportunities for a number of students (especially in Guatemala and Germany; e.g., Monika Hoffmann, Valeska Laux, Diana Rode – IFEM; Jenny Blumröder, Nicolas Boenisch, Michelle Theis – GCM).

Students from Brazil, Germany, Nigeria, and United Kingdom, among others, with veteran oak in Ushansky National Park, Ukraine .

Provide career opportunities for students and alumni

This year a significant number of students and alumni have been employed in centre projects and/or signed consultancy contracts generated through centre activities (e.g., GIZ, DAAD, University of Klagenfurt, Mainz Academy of Sciences; *Monika Hoffmann*, *Lena Strixner – IFEM, Daniela Aschenbrenner, Felix Cybulla, Marcus Waldherr – IFEM & GCM, Jenny Blumröder, Laura Geiger – GCM, Julia Sauermann – FIT).* Undergraduate and graduate students were also involved in project activities with partners and funding organizations (e.g., Untere Naturschutzbehörde Barnim, NABU, OroVerde), as well as the attendance of international congresses (e.g., Annual Meeting of the German Ecological Society - GfÖ, Oldenburg, 2011; European Congress of Conservation Biology at Scottish Exhibition and Conference Centre, Glasgow, September 2012). A number contributed to the publication of international papers and the presentation of posters. Two GCM students/alumni co-edited a book on Global Change Management.

Centre of Econics and Ecosystem Management at the European Congress of Conservation Biology, Scottish Exhibition and Conference Centre, Glasgow, September 2012.

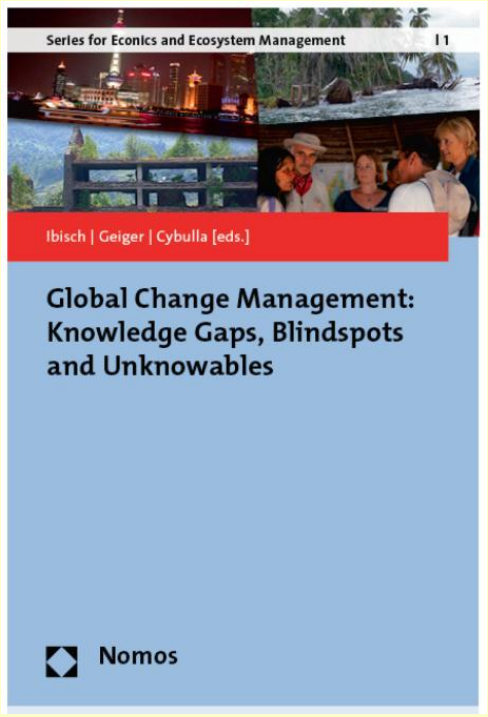
Contribute to the profile, prestige, visibility and internationalization of both institutes

The activities of the Centre for Econics and Ecosystem Management contribute to the core objectives **of both partner institutes including the objective to expand and develop higher education delivery to a wider international audience of students.** It promotes joint teaching and research activities, it contributes to institutional networking and generates manifold opportunities for students and alumni. We participated in a great number of **workshops and international congresses**, and have also carried out **consultancy** and field work around the world. Our activities have included work in China, Colombia, Costa Rica, Germany, Guatemala, Peru, Russia, Slovakia, Ukraine, and the UK.

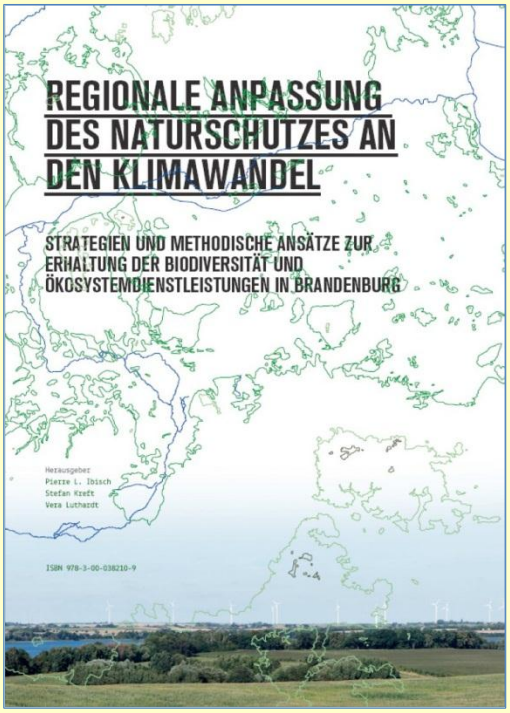
Meeting of the Advisory Board of the Global Change Management *Master programme: Pierre Ibisch, Stefan Opitz (GIZ), Felix Cybulla and Laura Geiger during presentation and donation of the book* Global change management: knowledge gaps, blindspots and unknowables.

Of particular note this year was the joint Thematic Poster Exhibition on 'Econics' with colleagues from Berlin Technical University and, a pre-congress training course on Adaptive Conservation Management at the *European Congress of Conservation Biology* (Scottish Exhibition and Conference Centre, Glasgow, September 2012). We achieved **publications in renowned international journals** (e.g., Journal of Applied Ecology, Biodiversity and Conservation, Ecological Complexity, Environmental Management, and Conservation Biology), as well as launch the first in a series of books on **Econics and Ecosystem Management** with the *Nomos* publishing house. Our **informative website** www.centreforeconics.org continues to be up-dated with news, events and activities of the centre including recent press releases on roadless areas, radio interviews on ancient beech forest, and press conferences on the recent German-funded work carried out in collaboration with Russia and Kazakhstan on the development of a UNESCO biosphere reserve for the Altai Mountains. .

First book in Series for Econics and Ecosystem Management



Book on regional adaptation of nature conservation to climate change



Centre webpage with news section (http://www.centreforeconics.org/news-and-events/)

Example of cooperative European research: paper on 'roadless areas' in Europe; most downloaded article of Environmental Management in November 2011, and in autumn 2011.

Environmental Management (2011) 48:865–877
DOI 10.1007/s00267-011-9751-z

FORUM

Roadless and Low-Traffic Areas as Conservation Targets in Europe

Nuria Selva · Stefan Kreft · Vassiliki Kati · Martin Schluck · Bengt-Gunnar Jonsson · Barbara Mihok · Henryk Okarma · Pierre L. Ibisch

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Abstract With increasing road encroachment, habitat fragmentation by transport infrastructures has been a serious threat for European biodiversity. Areas with no roads or little traffic ("roadless and low-traffic areas") represent relatively undisturbed natural habitats and functioning ecosystems. They provide many benefits for biodiversity and human societies (e.g., landscape connectivity, barrier against pests and invasions, ecosystem services). Roadless and low-traffic areas, with a lower level of anthropogenic disturbances, are of special relevance in Europe because of their rarity and, in the context of climate change, because of their contribution to higher resilience and buffering capacity within landscape ecosystems. An analysis of European legal instruments illustrates that, although most laws aimed at protecting targets which are inherent to fragmentation, like connectivity, ecosystem processes or integrity, roadless areas are widely neglected as a legal target. A case study in Germany underlines this finding. Although the Natura 2000 network covers a significant proportion of the country (16%), Natura 2000 sites are highly fragmented and most low-traffic areas (75%) lie unprotected outside this network. This proportion is even higher for the old Federal States (western Germany), where only 20% of the low-traffic areas are protected. We propose that the few remaining roadless and low-traffic areas in Europe should be an important focus of conservation efforts; they should be urgently inventoried, included more explicitly in the law and accounted for in transport and urban planning. Considering them as complementary conservation targets would represent a concrete step towards the strengthening and adaptation of the Natura 2000 network to climate change.

Keywords Transport policy · Natura 2000 · Fragmentation · Conservation law · Conservation targets · Climate change adaptation

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Introduction

Habitat fragmentation by transport networks and consequential secondary development has become one of the most serious global threats to biological diversity (EEA 2002; Iuell and others 2003; Laurance and others 2009;

News in the web about article in Ecological Complexity by Lisa Freudenberger et al.

http://www.sonnenseite.com/Umwelt,Neue+globale+Karte+zeigt+die+Funktionstuechtigkeit+von+Oekosystemen,16,a23921.html

http://euroconbio.blogspot.de/2012/11/a-new-global-map-displays-functionality.html

In the reporting period, the directors of the centre served as peer reviewers for the following international journals or publishing houses: **Biodiversity and Conservation, Climate Poliy, Conservation Biology, Conservation Letters, Environmental Management, Eurasian Journal for BioSciences, Journal of Sustainable Society, PLOS One,** and **Springer** (books).

Pierre Ibisch served as member of the **German Academic Exchange Service (DAAD)** commission 'Quality network Biodiversity', co-speaker of the **Cooperative Graduate Programme Adaptive Nature Conservation under Climate Change** (Univ. of Potsdam, Univ. of Appl. Sciences Eberswalde & Potsdam Institute for Climate Impact Research at the Potsdam Graduate School), member of the advisory board of the **Deutsche Umweltstiftung**, member of the Board of Directors of the **European Section of the Society for Conservation Biology and Chair of its Policy Committee**, member of the **Scientific Committee 3rd European Congress on Conservation Biology (ECCB)**, Glasgow, 2012 (Society for Conservation Biology), and as Scholarship tutor of the **Heinrich Boell Foundation**.

Peter Hobson has recently been appointed to the **Policy Committee of the European Section of the Society for Conservation Biology**. He also continues to serve on various UK government agency advisory councils including the **East of England Environment Agency RFERAC, Forestry Commission Regional Woodland Group** and the **Chelmsford and Essex Biodiversity Action Group**.

C. Mid-term objectives and current development scenarios

The Centre for Econics and Ecosystem Management is working towards progressing both master programmes, Global Change Management and Conservation Management under Global Change. The Advisory Board for the international Master programme Global Change Management unanimously endorsed the proposal of systematically supporting the study programme. We will further develop innovative education offers related to econics and ecosystem management.

The centre is to apply to become a registered society in order to support project recruitment and implementation and secure its position as a competitive player in the field of conservation research and services. We look forward to further consultancy activities for the GIZ and project activities related to adaptive management and transboundary conservation (e.g., in Albania, with DAAD, and Russia/Kazakhstan with BfN).

As well as continue with the publication of peer-reviewed papers we intend to start writing the second book of the centre Series for Econics and Ecosystem Management on forest econics in the forthcoming year.

List of recent publications

Under review:

DOLGENER N., L. FREUDENBERGER, N. SCHNEEWEISS, P.L. IBISCH & R. TIEDEMANN (under review): Projecting current and potential future distribution of the Fire- bellied toad *Bombina bombina* under climate change in northeastern Germany.

DOLGENER N., L. FREUDENBERGER, M. SCHLUCK, N. SCHNEEWEISS, P.L. IBISCH & R. TIEDEMANN (under review) Environmental Niche Factor Analysis (ENFA) relates environmental parameters to abundance and genetic diversity in an endangered amphibian, the fire-bellied-toad (*Bombina bombina*).

FREUDENBERGER L., D. BIBER, P. HOBSON & P. L. IBISCH (under review) INSENSA-GIS – A new software tool for environmental assessments.

FREUDENBERGER L., P. HOBSON, S. RUPIC, M. SCHLUCK, J. SAUERMANN, S. KREFT, N. SELVA & P.L. IBISCH (under review) Spatial Road Disturbance Index (SPROADI) for conservation planning: a novel landscape index, demonstrated for the state of Brandenburg, Germany.

PACKHAM, J.R., P.R. HOBSON & C. NORRIS: Common beech *Fagus sylvatica* L; survival and longevity in changing times.

In press:

DOLGENER, N., L. FREUDENBERGER, N. SCHNEEWEISS, P.L. IBISCH, R. TIEDEMANN: Projecting current and future distribution of the fire bellied toad *Bombina bombina* under climate change in northeastern Germany. *Regional Environmental Change.*

FREUDENBERGER, L., M. SCHLUCK, S. KREFT, H. SOMMER, P. HOBSON, S. REICHLE, C. NOWICKI, W. BARTHLOTT & P.L. IBISCH: Nature conservation: priority-setting needs a global change. *Biodiversity and Conservation (special issue Forest Biodiversity Conservation in a Changing Climate, Freiburg Conference).*

HICKLER, T., A. BOLTE, B. HARTHARD, C. BEIERKUHNLEIN, M. BLASCHKE, TH. BLICK, W. BRÜGGEMANN, W. H. O. DOROW, M.-A. FRITZE, TH. GREGOR, P. IBISCH, CH. KÖLLING, I. KÜHN, M. MUSCHE, S. POMPE, R. PETERCORD, O. SCHWEIGER, W. SEIDLING, S. TRAUTMANN, TH. WALDENSPUHL, H. WALENTOWSKI, N. WELLBROCK (2012): Folgen des Klimawandels für die Biodiversität in Wald und Forst. In: Mosbrugger, V., G. Brasseur, M. Schaller, & B. Stribrny (eds.): Klimawandel und Biodiversität Folgen für Deutschland. WBG, Darmstadt.

IBISCH, P.L.: Ökosystemmanagement. In: Wilhelm, Jürgen/Ihne, Hartmut (Hg.): Einführung in die Entwicklungspolitik, Münster/Hamburg: Lit-Verlag, 3. Auflage.

VOHLAND, K., F. BADECK, K. BÖHNING-GAESE, G. ELLWANGER, J. HANSPACH, P.L. IBISCH, S. KLOTZ, S. KREFT, I. KÜHN, E. SCHRÖDER, S. TRAUTMANN & W. CRAMER: Schutzgebiete Deutschlands im Klimawandel – Risiken und Handlungsoptionen. Naturschutz und Biologische Vielfalt. Bundesamt für Naturschutz, Bonn.

Included (co-)authored chapters:

VOHLAND, K., G. ELLWANGER, J. HANSPACH, P.L. IBISCH, S. KLOTZ, S. KREFT, I. KÜHN & E. SCHRÖDER: Schutzgebiete als Inseln im Klimastress? – Einleitung und Projektbeschreibung.

KUNZE, B., S. KREFT & P.L. IBISCH: Naturschutz im Klimawandel: Risiken und generische Handlungsoptionen für einen integrativen Naturschutz.

KREFT, S., F. TUCCI, M. SCHLUCK, L. STRIXNER, I. VAN AHEE, M. BIENEK, N. LINKE & P.L. IBISCH: Indexbasierte Vulnerabilitätsabschätzung für Schutzgebiete und Ableitung von Handlungsoptionen.

KREFT, S., B. BRENNEIS & P.L. IBISCH: Indexbasierte Analysen der Sensitivität gegenüber dem Klimawandel am Beispiel deutscher Brutvögel.

VOHLAND, K., F. BADECK, K. BÖHNING-GAESE, P.L. IBISCH, J. HANSPACH, S. KLOTZ, S. KREFT, I. KÜHN, S. TRAUTMANN, W. CRAMER & G. ELLWANGER: Fazit und Ausblick.

2012

FREUDENBERGER L., P.R. HOBSON, M. SCHLUCK & P.L. IBISCH (2012) A global map of the functionality of terrestrial ecosystems. Journal of Ecological Complexity 12: 13–22, doi: 10.1016/j.ecocom.2012.08.002.

IBISCH, P.L., S. KREFT & V. LUTHARDT (eds.) (2012): Regionale Anpassung des Naturschutzes an den Klimawandel: Strategien und methodische Ansätze zur Erhaltung der Biodiversität
und Ökosystemdienstleistungen in Brandenburg. Hochschule für nachhaltige Entwicklung Eberswalde, Eberswalde (ISBN 978-3-00-038210-9).

Included (co-)authored chapters:

KREFT, S., L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Warum gibt es Naturschutz? 32-37.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Was sind die aktuellen Bedrohungen der Natur? 38-43.

KREFT, S., L. STRIXNER, V. LUTHARDT & P. L. Ibisch (2012): Wie kommt es zu Zielsetzungen im Naturschutz? 44-51.

KREFT, S., L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Welche Ziele sind aktuell im Naturschutz formuliert? 52-61.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Wo in Brandenburg findet Naturschutz statt? 62-67.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Verfügen wir über die Informationen, um den Zustand der Schutzobjekte in Brandenburg zu beurteilen? 68-73.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Gibt es falsche Naturschutzziele? 74-77.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Welche

Veränderungen sind für Brandenburgs Klima zu erwarten? 78-81.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Ist Klimawandel wirklich relevant als Bedrohung für die Biodiversität? 82-87.

KREFT, S., L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Wie können Verwundbarkeiten gegenüber dem Klimawandel bewertet und daraus Ziele und Managementoptionen abgeleitet werden? 88-99.

SAUERMANN, J., S. KREFT, L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Wie beeinflussen räumliche Gegebenheiten die Vulnerabilität? 100-105.

KUNZE, B., S. KREFT, L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Wie ist es möglich, trotz Unsicherheiten Zielvorgaben zu entwickeln? 106-109.

KREFT, S., L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Welche Ziele sollten Priorität erhalten, um die Klimawandel-Vulnerabilität der Biodiversität zu reduzieren? 110-117.

KUNZE, B., S. KREFT, L. STRIXNER, V. LUTHARDT & P. L. IBISCH (2012): Welche neuen Ziele ergeben sich für den Naturschutz, um zum Klimaschutz beizutragen? 118-123.

STRIXNER, L., S. KREFT, V. LUTHARDT & P. L. IBISCH (2012): Welche neuen Ziele des Naturschutzes helfen der Gesellschaft, mit dem Klimawandel zurecht zu kommen? 124-127.

FREUDENBERGER, L., M. SCHLUCK & P. L. IBISCH (2012): Bewertung der Funktionstüchtigkeit von Ökosystemen im Klimawandel – neuartige Prioritätensetzung auf der Grundlage aktueller Ökosystemforschung. 144-155.

SAUERMANN, J., L. FREUDENBERGER, J.-P. MUND & P. L. IBISCH (2012): Naturschutz-Priorisierung von Waldflächen am Beispiel des Landkreises Barnim, Brandenburg. 156-167.

ASCHENBRENNER, D., M. WELSCH, S. OPFERMANN, J. PETERS & P. L. IBISCH (2012): Anwendung des systemisch-adaptiven Managementansatzes Offene Standards für die Naturschutzpraxis in der Landschaftsrahmenplanung am Beispiel des Landkreises Barnim, Brandenburg. 168-185.

ASCHENBRENNER, D., F. CYBULLA & P. L. IBISCH (2012): Die Offenen Standards für die Naturschutzpraxis und die Software MiradiTM – Unterstützung für die adaptive Naturschutzplanung in Brandenburg. 186-193.

CYBULLA, F., L. STRIXNER, D. ASCHENBRENNER, N. BOENISCH, C. UNSELT, S. GROHE & P. L. IBISCH (2012): Kohärente Planung im Naturschutz auf drei Managementebenen - FFH-Gebiet Biesenthaler Becken, Naturpark Barnim, Landkreis Barnim. 194-205.

IBISCH. P. L., S. KREFT & V. LUTHARDT (2012): Wege zu einer zukunftstragenden Strategie in Brandenburg. 214-225.

IBISCH, P.L., L. GEIGER & F. CYBULLA (eds.) (2012): Global change management: knowledge gaps, blindspots and unknowables. Nomos, Sinzheim.

Included (co-)authored chapters:

IBISCH, P.L., F. CYBULLA & L. GEIGER (eds.): Preface. VII-XI.

IBISCH, P.L. & P.R. HOBSON: Blindspots and sustainability under global change: non-knowledge illiteracy as a key challenge to a knowledge society. 15-54.

IBISCH, P.L., P.R. HOBSON & S. KREFT: The European nature conservation network Natura 2000 in meeting uncertain challenges of climate change: Applying principles of complex systems and ecosystem theory. 131-152.

GEIGER, L., S. KREFT & P.L. IBISCH: Reducing blindspots: MARISCO, a planning approach that integrates risk management into biodiversity conservation. 153-212.

HOBSON, P.R. & P.L. IBISCH: Learning from nature for sustainability: an econical approach to (non-) knowledge management. 223-251.

IBISCH, P.L. & C. NOWICKI (2012): Vulnerability analysis and strategies for climate change adaptation in the El Sira Community Reserve, Peru. Experiences using the methodology in the El Sira-GIZ project, Peru. Application of the method: Adaptive Risk and vulnerability Management at Conservation Sites (MARISCO) in the Peruvian Amazon. Ed.: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Proyecto Biodiversidad y Cambio Climático en la Reserva Comunal "El Sira", Lima, Peru.

WAGNER, N., SILVESTRO, D., BRIE, D., IBISCH, P.L., ZIZKA, G., WEISING, K. UND K. SCHULTE (2012): Spatio-temporal evolution of *Fosterella* (Bromeliaceae) in the Central Andean biodiversity hotspot *J. Biogeography(*doi:10.1111/jbi.12052).

2011 (selection)

GEYER, J., I. KIEFER, S. KREFT, V. CHAVEZ, N. SALAFSKY, F. JELTSCH & P.L. IBISCH (2011): A classification of stresses to biological diversity caused by global climate change. *Conservation Biology 25: 708–715 (DOI: 10.1111/j.1523-1739.2011.01676.x).*

IBISCH, P.L., J. GEYER, L. SCHMIDT, V. POKYNCHEREDA & V. GUBKO (eds.) (2011): Carpathian Biosphere Reserve: challenges and solutions for protected area management in Ukrainian Transcarpathia. Shaker, Aachen. 2x 242 pp. (Engl. + Ukrain. language).

Included (co-)authored chapters:

IBISCH, P.L. & V. GUBKO: Fedir D. Hamor. Visionary driver of Carpathian Biosphere Reserve spearheading European primeval forest conservation. 11-13.

GEYER, J., L. SCHMIDT, F. CYBULLA & P.L. IBISCH: Introduction. 17-20.

GEYER, J., L. SCHMIDT, F. CYBULLA, I. KRUHLOV, J. KLOIBER & P.L. IBISCH: Methodological framework: The Open Standards for the Practice of Conservation. 21-30.

GEYER, J., L. SCHMIDT & P.L. IBISCH: General results. 37-38.

GEYER, J., L. SCHMIDT, F. CYBULLA, I. KRUHLOV, J. KLOIBER & P.L. IBISCH: Introduction. 21-30.

HAMOR, F.D., V. POKYNCHEREDA, Y. DOVHANYCH, V. GUBKO, L. SCHMIDT, L. STRIXNER, J. GEYER, F. CYBULLA, J. KLOIBER & P.L. IBISCH: Application of the extended *Open Standards* for the Practice of Conservation to the CBR. 39-106.

SCHMIDT, L., J. GEYER & P.L. IBISCH: Conclusions and outlook. 107-108.

NORRIS, C., P.R. HOBSON & P.L. IBISCH (2011): Microclimate and vegetation function as indicators of landscape thermodynamic efficiency. *Journal of Applied Ecology 49: 562–570 (DOI: 10.1111/j.1365-2664.2011.02084.x).*

NORRIS, C., P. IBISCH & P. HOBSON 2011. Searching for empirical evidence of forest resilience - developing indicators of the thermodynamic efficiency of ecosystems. In: H.D. Knapp & A. Fichtner (eds.): Beech forests. Joint natural heritage of Europe. *BfN-Skripten 297. Federal Agency for Nature Conservation, Germany, Bonn (ISBN 978-389624-032-3). 77-85.*

SCHMIDT, L., K. GERBER & P.L. IBISCH (2011): Ein Rahmen für effektive Waldklimaschutzvorhaben. Germanwatch, Bonn, 59 pp. (ISBN 978-3-939846-85-7) (online unter: *http://www.germanwatch.org/klima/redd11eff.pdf*).

REYER, C. J. BACHINGER, R. BLOCH. F.F. HATTERMANN, P.L. IBISCH, S. KREFT, P. LASCH, W. LUCHT, C. NOWICKI, P. SPATHELF, M. STOCK & M. WELP (2011): Climate change adaptation and sustainable regional development: A case study for the Federal State of Brandenburg, Germany. *Regional Environmental Change. DOI 10.1007/s10113-011-0269-y.*

SELVA, N., S. KREFT, V. KATI, M. SCHLUCK, B.-G. JONSSON, B. MIHOK, H. OKARMA & P.L. IBISCH (2011): Roadless and low-traffic areas as conservation targets in Europe. *Environmental Management. 48: 865–877.*

SIECK, M., IBISCH, P.L., MOLONEY, K. A. & JELTSCH, F. (2011): Current models broadly neglect specific needs of biodiversity conservation in protected areas under climate change. *BMC Ecology, 11:12 (doi:10.1186/1472-6785-11-12).*

Directors of the centre together with Ilke Tilders, Foundations of Success, and Sascha Müller-Kraenner, The Nature Conservancy,members of the advisory board.

Oral presentations, conferences, workshops

Staff of Centre of Econics and Ecosystem Management with colleagues and friends from Katon-Karagaisky National Park, Kazakhstan, Federal Agency for Nature Protection – BfN, and BTE, on Lake Multa in the Altai Mountain in December 2012.

2012

Event/ institution	Place	Author(s) and title	Date
DIE LINKE, „Sägen wir am eigenen Ast? Eine Diskussion zu Brandenburgs Forstwirtschaft im Fadenkreuz von Problemen und Interessen“	Eberswalde, Germany	S. Kreft **Funktionstüchtigkeit von Wäldern als Maßgabe für Waldpolitik und -wirtschaft**	29.11.2012
KlimaMORO – Leitfaden regionale Klimafolgenbewertung, Praxisworkshop	Frankfurt (Main), Germany	S. Kreft, L. Geiger, C. Nowicki, S. Reichle, I. Renner, P. Hobson, P. Ibisch **MARISCO - Adaptives Management von Risiken und Vulnerabilität im Naturschutz**	13.11.2012
1st expert workshop & Kick-off event. Project: Development of a management plan for the projected tranboundary biosphere reserve	Manzherok/ Gorno-Altaisk, Russia	P. Ibisch **MARISCO** **Adaptive management of risk and vulnerability at conservation sites**	27.11.2012

Workshop on Communication Structures within the UNESCO World Heritage "Primeval Beech Forests of the Carpathians and Ancient Beech Forests of Germany"	Banska Bystrica, Slovak Republic	P. Ibisch, M. Waldherr **Follow-up Workshop to the Project "World Heritage Beech Forests – Sustainable Management of the Surroundings of the World Heritage Primeval Beech Forests of the Carpathians in Slovakia and Ukraine" on the topics of Communication, Information and Environmental Education**	4.-7.11.2012
International Association for Landscape Ecology (IALE), Jahrestagung 2012 der deutschen Sektion	Eberswalde	F.BERHORN & L. STRIXNER **Klimawandel (k)ein Thema der Natura 2000-Managementplanung – Wünsche, Hoffnungen und die Realität**	24.10.2012
Workshop "How to avoid fragmentation in Europe´s least fragmented areas", Infra Eco Network Europe 2012 International Conference	Potsdam, Germany	S. Kreft **Approaches to conservation of roadless areas - examples**	22.10.2012
Dissemination event Management plans for protected areas in the Province Jiangxi, China Sino-German Climate Partnership Project	Nanchang, China	P. Ibisch **Adaptive management of risk and vulnerability at conservation sites and strategies for climate change**	15.10.2012
Expert workshop in the course of the project "European World Heritage Beech Forests", International Academy for Nature Conservation, BfN	Isle of Vilm, Germany	P. Ibisch, M. Waldherr, J.-P. Mund, J. Sauermann **Beech Forests – Joint Natural Heritage of Europe (4) – The potential for a finite nomination of primeval and ancient beech forests of Europe to the World Heritage List**	3.-6.10.2012
Session "Current and future management practices", International Conference on Managing Protected Areas under Climate Change	Dresden, Germany	S. Kreft, L. Geiger, C. Nowicki, S. Reichle, I. Renner, P. Hobson, P. Ibisch **MARISCO – an adaptive conservation planning instrument designed for the proactive management of climate change risk**	Sept. 2012
Second symposium on 'Flora, vegetation and landscape of Pomerania. Plant diversity in a changing world	Wartin, Germany	P. Ibisch, L. Freudenberger, J. Blumröder, P. Hobson **Biodiversity in a changing world - a global perspective**	8.9.2012
PAN Parks Foundation, Symposium Wilderness at the edge of survival in Europe, European Congress of Conservation Biology	Glasgow, UK	P. Ibisch, L. Freudenberger, J. Sauermann, N. Selva, P. Hobson **Towards a quantification of wilderness? Innovative approaches to spatial planning and priority-setting for biodiversity**	1.9.2012

		functionality	
PAN Parks Foundation, Symposium Wilderness at the edge of survival in Europe, European Congress of Conservation Biology	Glasgow, UK	N. Selva, S. Kreft, V. Kati, B.-G. Jonsson, P.L. Ibisch **Roadless areas: a potential tool to define European wilderness areas**	1.9.2012
Oral session 'Landscape Ecology and Conservation'. European Congress of Conservation Biology	Glasgow, UK	P. Hobson, L.. Freudenberger, C.. Norris, M. Schluck, P. Ibisch **Applying measures of non-equilibrium thermodynamics to the assessment of ecosystem function in landscapes subjected to rapid change**	31.8.2012
Joint symposium European and African Section, Society for Conservation Biology, European Congress of Conservation Biology	Glasgow, UK	P. Ibisch (chair), M. Dieterich, R. Luick, E. Mwavu, F. Babalola **Bioenergy and biodiversity**	29.8.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	Blumroeder, J. S., L. Freudenberger, M. Schluck, P.R. Hobson, P. L. Ibisch, B.t. Brink, M. Bakkenes (Poster) **Global land use change and climate variability**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	F. Cybulla, D. Aschenbrenner, N. Boenisch, S. Kreft, P. Ibisch, I. Tilders (Poster) **Regional adaptation towards climate change: a nested systems approach based on experience in Northeastern Germany (County of Barnim, Brandenburg)**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	L. Freudenberger, P. Hobson, M. Schluck, P. L. Ibisch (Poster) **Thermodynamic efficiency, a new approach to prioritize areas for nature conservation**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	L. Geiger, P. Hobson, P. Ibisch (Poster) **Non-knowledge management in nature conservation, a new approach for a systemic risk spotting and evaluation**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	P. Hobson, C. Norris, P. Ibisch (Poster) **Surface temperature and plant trait analysis as proxy measures of ecosystem resilience and thermodynamic efficiency in forest ecosystems: an econical message to forestry**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics,	Glasgow, UK	P. Ibisch, P. Hobson (Poster) **Econics: a new systemic framework for**	28.8.-1.9.2012

sustainability and conservation'. European Congress of Conservation Biology		**sustainable development and conservation**	
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	S. Kreft, P. Ibisch (Poster) **An '*Econics* check' of conservation policy in Brandenburg State, Germany**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	C. Norris, P. Hobson, P. Ibisch (Poster) **Establishing an effective theoretical framework for ecosystem sustainability based on principles of thermodynamics**	28.8.-1.9.2012
Thematic Poster Exhibition 'Econics: systemics, sustainability and conservation'. European Congress of Conservation Biology	Glasgow, UK	G. Spanjar, P. Hobson, S. Mosler (Poster) **Working towards a new framework for assessing ecosystem services of urban green spaces**	28.8.-1.9.2012
Pre-Congress Training Course, European Congress of Conservation Biology	Glasgow, UK	P. Ibisch, P. Hobson ,F. Cybulla, I. Tilders, L.Geiger **Adaptive conservation management**	27-28.8.2012
Deutsch-russsischer Workshop „Auswirkungen des Wandels von Klima und Landnutzungen auf Schutzgebiete und Biodiversität in der Ökoregion Altai-Sayan"	Gorno-Altaisk, Russia	P. Ibisch **Das geplante grenzüberschreitende Biosphärenreservat Altai Überlegungen und Aktivitäten im Rahmen eines entsprechenden Vorhabens des deutschen Bundesumweltministeriums**	20. – 22.8.2012
Policy Committee, Society for Conservation Biology- Europe Section; Rio + 20, side event "No Roads to a Green Economy; Mapping the Earth's Roadless Areas and their Services" organized by Kriton Arsenis (MEP)	Rio de Janeiro, Brazil	N. Selva, S. Kreft, V. Kati, M. Schluck, Bengt-G. Jonsson, B. Mihok, H. Okarma and P. Ibisch **Roadless and low traffic-areas as conservation targets in Europe**	22.6.2012
Training course with BSc / MSc students and conservation sector, Writtle College	Writtle, Chelmsford	P. Ibisch, F. Cybulla, P. Hobson **Vulnerability and risk management at conservation sites – MARISCO. Case study: Suffolk Coast & Heaths AONB**	18-20.6.2012
Workshop on project development within EU LIFE+ Information and Communication 2012	Eberswalde, Germany	M. Waldherr **Workshop on the development of the planned project "Beech for Life" (EU LIFE+ Information and Communication 2012),**	16.-17.4.2012

Module on International Nature Conservation, Bundesamt für Naturschutz	Vilm, Germany	P. Ibisch **Adaptive management planning with the Open Standards for the Practice of Conservation and the MIRADI software**	2.2.2012
Universität Hohenheim	Stuttgart-Hohenheim, Germany	P. Ibisch, P. Hobson **Naturschutz im globalen Wandel - neue Prioritäten, neue Praktiken?**	24.1.2012
Universität Rostock	Rostock, Germany	P. Ibisch , L. Freudenberger, P. Hobson **Naturschutz im globalen Wandel: neue Prioritäten, neuartiger Handlungsbedarf?**	12.1.2012

3rd European Congress of Conservation Biology, 28. August – 1. September 2012, Glasgow, Scotland

Thematic Poster Exhibition: Econics: systemics, sustainability and conservation

Pierre Ibisch & Peter Hobson

Bionics can be defined as the mimicking of biological structures and processes in order to improve the effectiveness and efficiency of modern technologies. In a similar context, Econics may also be defined as an analogous transdisciplinary approach to sustainability, working to the hypothesis that natural ecosystems provide a valuable template for the development of socio-economic systems. Specifically, it focuses on the analysis and replication of ecosystem efficiency and adaptive evolution under continual and unpredictable environmental change. Econics embraces principles taken from a diverse spectrum of existing disciplines and approaches that mimic ecosystem processes and functions. For instance, it includes recycling or adaptive change; concepts of adaptive management used in conservation; approaches adopted in industrial ecology; and theories of close-to-nature forestry. This Thematic Poster Exhibition introduces the general concept of econics, its principles, methods and especially its application to biodiversity conservation. The contributions cover theoretical and conceptual principles underpinning the subject as well as the application of complex systems thinking to conservation practice at different scales, within and beyond the boundaries of protected areas. Particular focus is given to the approaches taken in adaptive management that actively integrates all forms of conservation-relevant non-knowledge, for example, uncertain vulnerability against change and risks for system sustainability. Another important field of "econical" conservation is the orientation towards thermodynamically

efficient systems. It explains how principles of thermodynamics can be transferred to the assessment of ecosystems, and how then this may be applied to conservation priority-setting. Thermodynamic signatures of ecosystems can be used in various land use practices such as close-to-nature forestry under the influence of climate change. Cases studies draw on results from research in Europe (e.g., Carpathians, Germany, UK) and tropical regions.

2011 (since foundation of the centre)

Event/ institution	Place	Author(s) and title	Date
Centro Universitario de la Costa Sur (CUCSUR), Universität Guadalajara	Autlán, Jalisco, Mexiko	P. Ibisch **Cambios climáticos, biodiversidad y manejo adaptativo de conservación**	5.12.2011
Primer Coloquio Internacional sobre la Biodiversidad, Recursos Naturales y Sociedad, Universität Guadalajara	EXPO Guadalajara, Jalisco, Mexiko	P. Ibisch **Conservación de la biodiversidad en tiempos de cambios globales rápidos**	3.12.2011
Biogeographisches/ Geobotanisches/ Toxikologisches Kolloquium, Universität Trier	Trier, Germany	P. Ibisch, L. Freudenberger, P. Hobson **Naturschutz-Prioritätensetzung und Ökosystemmanagement im globalen Wandel**	7.11.2011
Barnim Landschaftsrahmenplan	Eberswalde, Germany	P. Ibisch **Landschaftsrahmenplanung für den Landkreis Barnim**	3.11.2011
Conference “Forest biodiversity and climate change”. Universität Freiburg	Freiburg, Germany	L. Freudenberger, M. Schluck, S. Kreft, H. Sommer, P. Hobson, S. Reichle, C. Nowicki, W. Cramer, W. Barthlott & P. Ibisch **Nature conservation: priority-setting needs a global change**	23.9.2011
41st Annual Meeting GfÖ, Symposium “Adaptive nature conservation under climate change: from science to practice”	Oldenburg, Germany	J. Geyer, V. Chavez, F. Jeltsch, P. Ibisch **Climate-change-induced stresses of biodiversity and how to integrate them into adaptive conservation planning**	8.9.2011
41st Annual Meeting GfÖ, Symposium “Adaptive nature conservation under climate change: from science to practice”	Oldenburg, Germany	S. Kreft, L. Strixner, J. Blatt, V. Luthardt, P. Ibisch **Adapting regional administrative conservation to climate change – a *Q&A* guide**	8.9.2011
Emeritierungsfeier Prof. Dr. Wilhelm Barthlott, Universität	Bonn, Germany	P. Ibisch **Biodiversität. Von der Erfassung zur**	1.7.2011

Bonn		**Erhaltung**	
Veranstaltung des Fachbereich für Wald und Umwelt der Hochschule für nachhaltige Entwicklung Eberswalde und der Stadt Eberswalde anlässlich des Internationalen Jahres der Wälder 2011	Eberswalde, Germany	P. Ibisch **Wälder unter Druck. Forschung zur Erhaltung von Waldökosystemen. Vom Wald lernen – Für den Wald lehren und forschen**	21.6.2011
Launching centre	Eberswalde, Germany	P. Ibisch & P. Hobson **What is Econics?**	8.6.2011
Workshop BIOMARCC (GIZ), Costa Rica	San José, Costa Rica	P. Ibisch **Manejo de riesgros y vulnerabilidad en la conservacion de la biodiversidad**	9.4.2011
Proyecto "Adaptación de la conservación del bosque al cambio climático en cooperación con la sociedad civil local"	Hotel Villa Maya, Petén, Guatemala	P. Ibisch **Manejo de riesgos en un proyecto redd en el parque nacional sierra de lancandon**	7.-9.2.2011

List of supervised theses

2011-2012 (Eberswalde)

2011

Master:

Brückner, Kati (GCM): Literaturanalyse zu den Wald- Lebensraumtypen des Projektgebiets INKA BB im Klimawandel – Ableitung der Sensitivität über regionale methodenbasierte Bewertungstrends

Hmielorz, Annemone (GCM): Reforming Land Tenure for the Reduction of Vulnerability against Global Change: A Case Study in the Omusati Region, Namibia

Jünemann, Maren Felicitas (RuN): Entwicklung eines Indexes zur Abschätzung der Vulnerabilität ungenutzter Moore gegenüber dem Klimawandel

Bachelor:

Baumanns, Elena (IFEM): Sustainable use of Xate palms in the Sierra del Lacanadón national Park, Guatemala – A systemic risk analysis

von Glahn, Marius (FOWI): Großherbivoren zur Erhaltung und Strukturierung von halboffenen Weidelandschaften

Moser, Christina (IFEM): Erarbeitung der Grundlagen zur Entwicklung eines adaptiven Managementplanes mit Hilfe der „Offenen Standards für die Naturschutzpraxis"

Rönspieß, Eva Marie (IFEM): Technische Naturschutz-Kenntnisse von jungen Erwachsenen mit Interesse an der Natur – Befragung der Erstsemester-Studierenden an der HNE Eberswalde im Fach „Biologische Vielfalt und Naturschutz"

Wortmann, Lea (IFEM): Community Conserved Areas (CCAs) in the UK – A preliminary review

Master:

Settke, Matthäus (RuN): Vulnerabilität von Wald-Biotoptypen gegenüber dem Klimawandel – Am beispiel des Biosphärenreserates Schorfheide-Chorin

2012

Diplom:

Kühn, Judith (LÖ, TU Berlin): Naturschutz im Kleinprivatwald am Beispiel des Biosphärenreservates Flusslandschaft Elbe – Brandenburg

Master:

Aschenbrenner, Daniela (GCM): Anwendung eines systemisch-adaptiven Managementansatzes – Offene Standards für die Naturschutzpraxis – in der Landschaftsrahmenplanung am Beispiel des Landkreises Barnim, Brandenburg (Deutschland)

Blumröder, Jeanette (GCM): Thermodynamic efficiency of forest ecosystems in Brandenburg – development of an index

Boenisch, Nicolas (GCM): Best practice outcome indicators in conservation – a dialogue between practice and science

Cybulla, Felix (GCM): Einheitliche Anwendung des adaptiven Planungs- und Management-ansatzes *Offene Standards für die Naturschutzpraxis* auf drei unterschiedlichen Planungsebenen – Eine Vergleichsstudie zur kohärenten Naturschutzplanung im Landkreis Barnim

Sauermann, Julia (FIT): A spatial forest value index supporting functional nature conservation: case study of Barnim County (Brandenburg, Germany) using a local forest management database

Theis, Michelle Elisabeth (GCM): Bewertung der Vulnerabilität von Europäischen Vogel-schutzgebieten gegenüber dem Klimawandel mit Fallstudien aus Baden- Württemberg und Brandenburg (Deutschland)

Bachelor:

Bareither, Nils (IFEM): Climate Change: The Chances of Afforestation to reduce Risks & Vulnerabilities in the High Andean mountains – The Case of the Huacrahuacho Watershed in Peru

Hoffmann, Monika (IFEM): Development of a Forest Connectivity Index - Case Study of Beech Forest in Brandenburg, Germany

Kühn, Martin (IFEM): Die „Offenen Standards für die Naturschutzpraxis“ als Hilfsmittel zur strategischen Ausrichtung von Naturschutz-maßnahmen am Beispiel des NSG Kindelsee-Springluch

Laux, Valeska (IFEM): Study on the Socioeconomic Potential of the Community Cumbres de Brazón on the Peninsula Paria (Venezuela) for a Sustainable Cacao Production *(Theobroma cacao)*

Matheis, Miriam (IFEM): The Potential of Wild and Traditionally Used Plats to Contribute to Food Security, An Ethno-Botanical Study in the Kafa Biosphere Reserve, Ethopia

Reubel, Teresa Lissa (IFEM): A Risk and Vulnerability Analysis of the Alto Purús National Park, Peru

Rupic, Slaven (IFEM): Spatial Road Disturbance Index (SPROADI), a novel Tool for Conservation Planning: Quantifying the Environmental Impacts of Traffic demonstrated for the State of Brandenburg, Germany

Schmidtke, Robert (Forstwirtschaft): geschichte und Status quo des Weltnaturerbeteils Buchenwald Grumsin, Brandenburg, (Deutschland)

Stein, Oliver (IFEM): Biodiversity conservation in southern Finland forests using the example of Red-List polypores within the METSO Forest Biodiversity Programme

Steinkühler, Johanna (IFEM): Developing a Conceptual Model for Tula Kabele in the Kafa Biosphere Reserve, Ethiopia – A Situation Analysis

Weibrecht, Katja (IFEM): Analysis and risk assessment of the impacts on the reforestation success in the Islet Restoration Project on Round Island, Mauritius

Wiedersatz, Birgit (IFEM): Land use scenarios for Chiapas (Mexico) under global change, with special reference to oil palm plantationsRode, Diana

(IFEM): Systemic Socio-Ecological Situation Analysis of the municipality of Libertador, Estado Sucre, Venezuela

Wienecke, Amelie (IFEM): The Application of the "Open Standards for the Practice of Conservation" improves Natural Resource Management for the Yelavali Village Program

List of supervised theses 2011-2012 (Writtle, Conservation Management under Global Change)

Jago Keen: The support of biodiversity by trees in the City of London: An exploratory Case Study

Julia Rolf: An evaluation of burial spaces within the UK Landscaping using Open Standards

Lucy Addison: An assessment of the effects of woody debris in attenuating river microclimates and its potential to favour biodiversity

Victoria Campen: Native breeds in conservation: an investigation into the behaviour of Red Poll cattle in wood-pasture

Jake Sales: Community conservation and the benefits of a localist approach

Alexandra Symonds: Can the decline in the European Eel (Anguilla Anguilla) numbers be attributed to altered water flow, reflecting long-term environmental change?

MSc. student Daniela Aschenbrenner facilitates session of workshop on conservation planning in Barnim county, Brandenburg, July 2011.

Projects

(implemented since existence of the centre; selection)

Project (short title)	Dura-tion	Funding without own commit-ments (€)	Donor/ funding institution	Status
Erarbeitung der Grundlagen eines modernen Managementkonzepzs für das Karpaten-Biosphärenreservat	2009-2011	99.785,-	Deutsche Bundesstiftung Umwelt	Concluded
BEAM 21 - Blended capacity-building on sustainable energy measures and action plans for European municipalities	2009-2012	66.427,-	EU IEE-08-731 über Heinrich-Böll-Stiftung Brandenburg	Concluded
Nachwuchsforschergruppe regionale Klimawandelanpassung	2009-2012	300.000,-	European Social Fund (LASA Brandenburg)	Concluded
Welterbe Buchenwälder- Nachhaltige Nutzung im Umfeld der UNESCO- Weltnaturerbestätte Primeval Beech Forest of The Carpathians (Slowakei, Ukraine)	2010-2012	102.763,-	Umweltbundesamt	Concluded
Anpassung des administrativen Naturschutzes an den Klimawandel – Managementoptionen und Gestaltung der politischen Instrumentarien im Land Brandenburg	2009-2015	503.000,- (gemeinsame Einwerbung mit Prof. Luthardt, HNEE) (+ BMBF-Zulage im Umfang von einigen tausend in €, 2011)	BMBF	Under implementation
System for risk management and vulnerability reduction *Conservación de Bosques y Desarrollo Comunitario Sostenible para la mitigación del cambio climático (Guatemala)*	2011-2013	105.000,-	OroVerde – Die Tropenwald-stiftung	Under implementation
'Handlungsoptionen Klimawandel' (im Naturschutz in Brandenburg)	2011	2.000,-	Mainzer Akademie der Wissenschaften und der Literatur, Nees-Institut für Biodiversität der	Concluded

			Pflanzen der Universität Bonn (Vorhaben Biodiversität im Wandel)	
Teilnahme ukrainischen Teams an Workshop zu Schutzgebietsmanagement in Spanien	2011	2.000,-	Eurosite, NL	Concluded
Global land-use change and climate variability	2011	10.000,-.	PBL, NL	Concluded
Beratung der Slowakei und der Ukraine bei der Etablierung von Kommunikationsstrukturen für Buchenwaldgebiete	2012	10.500,-	Umweltbundesamt (UBA)	Concluded
Forschungs- und Entwicklungsvorhaben "Europäisches Welterbe Buchenwälder"	2012-2014	230.000,-	Bundesamt für Naturschutz (BfN)	Under implementation
Entwicklung eines Managementplans für das geplante grenzüberschreitende Biosphärenreservat "Altai"	2012-2014	235259,	Umweltbundesamt / Bundesamt für Naturschutz (BfN)	Under implementation
Study course "Adaptive Conservation Site Management under Global Change" in Albania	1/2013	14.630,-	DAAD	Approved
Network partnership project "Cooperative Transboundary Learning for Ecosystem Management" (Albania, Montenegro, Kosovo)	2013	60.010,-	DAAD	Pre-approved

Lake Shkoder, Albania, is the study site for one of the first project activities in 2013: a joint training course on adaptive nature conservation management with Tirana university is funded by the DAAD.

Who we are

Directors

Prof. Dr. Pierre Ibisch
Principal Lecturer Dr. Peter Hobson

Advisory Board

Ilke Tilders, Foundations of Success Europe, supported the establishment of the Centre for Econics and Ecosystem Management and is the principal partner and advisor related to our adaptive management activities.
Dr. Sascha Mueller-Kraenner, Executive Director, The Nature Conservancy Europe, is member of our advisory board.

Senior collaborators

Martin Hollands - Senior Advisor

- Environmental consultant and Director of the Cambridge Centre for Conservation Policy
- Former Deputy Director of Fauna & Flora International and WWF program manager

PhD and doctoral candidates

Lucy Addison(Foundation Degree Conservation and the Environment; MSc Conservation Management)

- Complex systems theory and thermodyamics applied to river conservation
- Essex University PhD programme
- Supervisors: Dr P R Hobson and Professor P L Ibisch
- start: 2012

Anna Beames (Foundation Degree Conservation and the Environment; MSc Conservation Management)

- Topic: Complex forest frameworks and advanced adaptive systems for sustainable futures.
- Writtle College PhD programme
- Supervisors: Dr P R Hobson and Professor P L Ibisch
- start: 2011

Lisa Freudenberger (B.Sc. Biology; M.Sc. International Nature Conservation)

- Topic: Priority-setting and planning for nature conservation under global change
- Member of the cooperative graduate programme "Adaptive Nature Conservation under Climate Change" (Eberswalde University for Sustainable Development, Potsdam University, Potsdam Institute for Climate Impact Research
- Supervisor: Professor P L Ibisch
- Start: 2009

Laura Geiger (Dipl. Communication)

- Topic: Risk management in adaptive nature conservation under global change (with reference to Sierra del Lacandón National Park, Guatemala)
- Supervisor: Professor P L Ibisch
- In partnership with OroVerde
- Start: 2011

Juliane Geyer (B.Sc. International Forest Ecosystem Management; M.Sc. International Nature Conservation)

- Topic: Adaptive nature conservation under climate change (with special reference to Carpathian Biosphere Reserve, Ukraine)
- Member of the cooperative graduate programme "Adaptive Nature Conservation under Climate Change"
- Supervisors: Professor P L Ibisch and Professor F Jeltsch
- Start: 2009

Catherine Norris (BSc Geography; MSc Conservation Management)

- Topic: Indicators of thermodynamic efficiency of ecosystems (with case studies in UK, Germany and Ukraine)
- Writtle College PhD scholarship
- Supervisors: Dr P R Hobson and Professor P L Ibisch
- Start: 2009

Gideon Spanjar (MA in Landscape Architecture)

- Topic: Ecosystem services of green spaces in urban landscapes (case study in Netherlands)
- Writtle College PhD programme
- Supervisors: Dr P R Hobson and Dr S Mosler
- Start: 2011

Researchers (staff)

Stefan Kreft (Dipl. Biol.)
Julia Sauermann (B.Sc. International Forest Ecosystem Management; M.Sc. Forest Information Technology)
Lena Strixner (B.Sc. International Forest Ecosystem Management)
Marcus Waldherr (B.Sc. International Forest Ecosystem Management; M.Sc. Global Change Management)
Anja Wünsch (Dipl. Geoecology)

Affiliated professionals

Daniela Aschenbrenner (B.Sc. International Forest Ecosystem Management; cand. M.Sc. Global Change Management)
Jeanette Blumröder (B.Sc. Biology; M.Sc. Global Change Management)
Felix Cybulla (B.Sc. International Forest Ecosystem Management; M.Sc. Global Change Management)
Christoph Nowicki (Dipl. Biol.)

- Lecturer in conservation, Faculty of Forest and Environment

Lars Schmidt (B.Sc. International Forest Ecosystem Management; M.Sc. Global Change Management)

- Lecturer in conservation

Grumsin forest another component of the serial UNESCO World Heritage Site "Primeval Beech Forests of the Carpathians and Ancient Beech Forests of Germany".

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