

# HABIT-CHANGE NEWSLETTER

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## Editorial

Hello and welcome back!



2012 will be an exciting year — according to UNESCO it is the international year of sustainable energy for all, the animal of the year is the bat; in addition the European lark has been named tree of the year. Events of the year will be the Olympic Games in London, which according to their statement will be green games, and the Earth Summit 2012 will be held in Rio in June.

The highlights within HABIT-CHANGE will be the 5th partner meeting taking place in May in the Danube Delta and our very own conference “IMPACT” which will be held in September later this year. (A call for papers will be published soon. All further information can be found on page 3 in this newsletter.)

Until then, of course, there is still a lot of work to do, but we are very proud that the first results from our work packages start pouring in.

In this issue of the HABIT-CHANGE newsletter you will find a dissemination of the results achieved within the core output “Indicators and monitoring techniques, enhancement of models and scenarios”.

Furthermore there is an article on the stakeholder workshop held in Triglav National Park. You can also find reports from conference contributions and we introduce the lesser known fragile side of our investigation area — the Balaton Uplands National Park — and the investigation work carried out by our partners there.

Our first newsletter was met with great response and we would like to thank you for your feedback. Please stay in touch, we look forward to hearing your comments.

*Best wishes, the HABIT-CHANGE Lead Partner Team*

## Upcoming events

-  HABIT-CHANGE will hold a thematic workshop on the methodology to produce Potential Impact Maps (PIM) for protected habitats. The workshop is organized and hosted by University Vienna on 19 January 2012 in Vienna, Austria.
-  The 5<sup>th</sup> HABIT-CHANGE Partner Meeting will be held 8-10 May 2012, in the Danube Delta Biosphere Reserve, Romania. The meeting is Danube Delta National Institute for Research and Development in cooperation with the Lead Partner.
-  The HABIT-CHANGE project will be presented at the 5th International Scientific Conference on Water, Climate and Environment (BALWOIS 2012) held in Ohrid, Republic of Macedonia, from 28 May to 2 June 2012
-  HABIT-CHANGE will organise the “International Conference on Managing Protected Areas under Climate Change” (IMPACT) on 24 - 26 September 2012 in Dresden, Germany. The conference aims to inform relevant stakeholders about the HABIT-CHANGE project, disseminate the results as well as discuss about the topic with external experts. See page 3.

For more announcements see the project's website [www.habit-change.eu/index.php?id=31](http://www.habit-change.eu/index.php?id=31)

## Conference Announcement

### International Conference on Managing Protected Areas under Climate Change (IMPACT)

24 - 26 September 2012, Dresden, Germany

Climate Change and anthropogenic activities are challenging European habitats and their management. Especially protected areas are confronted with the pressing need to monitor changes, adapt management strategies and consider flexible responses to future developments.

IMPACT sets out to meet the growing need for sharing knowledge and experiences in the field of biodiversity conservation and climate change. Taking a transdisciplinary perspective, the aim of the conference is to bring together researchers, conservation managers and decision-makers in the field of nature conservation. It provides a platform for dialogue to develop a better understanding of the complex impacts of climate change on biodiversity on local level and the means to adapt management in protected areas accordingly. We anticipate 150 international participants to enjoy two days of technical sessions, workshops, poster exhibits and social activities, and one day of excursions.

The topics will be:

-  Monitoring and modelling of climate-induced impacts
-  Actual and future management practices
-  Awareness rising and stakeholder involvement
-  Legal aspects and policy recommendations

A call for papers will be published soon.

Climate change and the development of robust adaptation strategies are the key challenges of conservation management of the future. Climate smart conservation requires continuous adaptation to changing climate and their ecological consequences. Inter- and transdisciplinary research on cross-cutting themes is needed to provide mutual learning between all actors and the development of effective strategies.

IMPACT will present good practice examples and share experience of putting adaptation strategies into action.

IMPACT will improve the integration of research outputs into conservation projects as well as the identification of unsolved problems and further research needs. It will efficiently help conservation managers today to make decisions about climate impacts of the future.

One of the conference aims is to found the association "Climate Change and Protected Areas". This association should serve as a sustainable network for transdisciplinary exchange of experts in this field.

We hope to welcoming you at the IMPACT conference!

P.S.: For the latest news please keep checking our website: [www.habit-change.eu/impact](http://www.habit-change.eu/impact)

## Conference attendances and contributions



HABIT-CHANGE was present at the Biannual User Group Meeting “GIS in National Natural Landscapes” on 6 - 8 October 2011 at National Park administration Müritzt, Hohenzieritz, Germany.

Marco Neubert gave a speech on „**Modelling, Monitoring and Management of climate change impacts on nature conservation areas**“ describing applied monitoring strategies, and shared data bases, indicators and parameters and demonstrating first results of the project.

On 12 -14 October 2011 the Annual Meeting of the German Chapter of IALE took place in Berlin and HABIT-CHANGE was present with a symposium on „**How to cope with climate change in conservation areas - potentials of modelling, monitoring and management**“.

Within this workshop Marco Neubert, Stefan Lang and Michael Förster argued the question if information on habitat changes due to climate change and land use can be gathered with remote sensing. The second speech was by Judith Stagl, Katrin Vohland and Fred Hattermann with the title “The contribution of modelling - technical pinnacle or gimmick?”. The third conference contribution was a discourse by Christian Wilke and Sven Rannow on how findings from modelling and monitoring can be translated into concrete management strategies and what challenges need to be overcome.

A forum on „**The role of local authorities in adaptive management in protected areas with respect to the climate change**“ was held by the HABIT-CHANGE project partner Bierbza National Park Administration. The event took place on 12 December 2011 at the Bierbza National Park Education Centre in Osowiec-Twierdza, Goniądz, Poland.



Marco Neubert, Christian Wilke and Sven Rannow (from left to right) at the additional presentation of the HABIT-CHANGE project with posters and further information material during the IALE conference

## **Presentation of Finalized Project Core Outputs: Indicator-based classification tool and software implementation**

The main objective was to develop a tool that assesses the sensitivity of habitat types to climate change impacts but also of entire investigation areas within the HABIT-CHANGE project. Thereby, the main objective was to allow the transferability of the results to any other area within the CENTRAL EUROPE region. We combined two different methods to classify sensitivity and indicator values in our tool. The first one evaluates the species composition of each habitat type according to the species indicator value ranges of moisture and temperature. In contrast, the second one makes use of an already established and published scheme to derive sensitivity values for habitat types. Both approaches are incorporated in the tool and can be applied separately but can also be combined.

### **Methods**

The tool was developed using a subset of the existing habitat types in the HABIT-CHANGE project for which a species list was generated querying the EUNIS database

In a first step, the habitat types for the classification tool was extracted from the database generated during Outputs 3.2.2 and 3.2.5. The subset of 59 habitat types, which was used for the analysis, is localised in the continental and alpine biogeographic region. The analysis approach itself is transferable to any other biogeographic region within the CENTRAL EUROPE region.

In a second step a species list was created for each of the habitat types selected for the development of this tool. The habitat type code was used to query species within the EUNIS database (<http://eunis.eea.europa.eu>). For each habitat type “flowering plants”, “fens” and “mosses & liverwoods” were exported from the Habitat Directive Annex I selection. Thus the query for the 59 habitat types resulted in 713 different species. Then the scientific names for each species in the EUNIS species list were checked and if necessary adapted to fit into the nomenclature of the Flora Europea (The Flora Europaea Editorial Committee 2001), which was used as common nomenclature incorporated in the tool. This list is identical to the vegetation analysis software Turboveg .

The first classification method makes use of plant indicator schemes like temperature or moisture, which can be used to gain an overall impression on the habitat demands of a species composition, and are therefore useful to predict the sensitivity of a species composition concerning climate change induced alterations in the habitats.

However, there are various indicator schemes commonly applied within the CENTRAL EUROPE region. Therefore, the tool was developed modular to fit the different ordinal scales of the indicator schemes into the classification scheme. The following indicator schemes were incorporated into the tool: (1) The new adapted *Landolt* Values listed in the Flora Indicativa (Landolt & Bäumler 2010) to be used by investigation area within the alpine biogeographical region. This scale has the advantage of incorporating also bryophytes and lichens. (2) The *Ellenberg* scheme (Ellenberg et al. 1992) is commonly used within the continental region and was widely adapted locally by various countries (e.g. Polish values from *Zarzycki* et al. 2002). (3) *Borhidi* (1995) adapted the *Ellenberg* Values to fit for the pannonian region.

The tool developed in this output categorizes the ordinal Indicator Values into three classes to generalize the values into comparable indices for different regions. To do that, look up tables were defined, which translate the original indicator value into a portion of defined categories. The index for temperature and moisture were calculated using the statistical median of those species with Indicator Values present in the current Indicator scale.

Additionally, further descriptive values like minimum, maximum and range were calculated.

The indices for temperature and moisture accomplish on the one hand that different indicator schemes can be used and on the other hand they give a quick impression on the demands of a species composition typical for a habitat type without the need of detailed vegetation reléves.

The second classification method makes use of a sensitivity assessment scheme of Natura2000 habitats in Germany (Petermann et al. 2007). The sensitivity values are based on nine criteria of which many are related to data compiled in the Red List for endangered habitats. The value of each criterion was assigned according to the assessment scheme for each habitat type and patches, respectively. Afterwards, the values were summed and translated into a portion of defined categories.

Furthermore, the values of the criteria can be adapted for each biogeographical region within CENTRAL EUROPE since the tool was developed based on the subset located in alpine and continental biogeographical region.

## Results

The output of the tool is a tabular list (MS Excel file) of sensitivity and indicator values on the level of habitat types or patches and can further be joined with geospatial data sets to map the temperature, moisture and sensitivity pattern. This was done in Output 4.3.5. The tool is also designed to easily be fitted into the SDSS (spatial decisions support system) ultimately providing practices and strategies how to adapt to climate change for the queried area which is currently being developed within Work Package 5 of the HABIT-CHANGE project.

The complete description of the tool including references as well as the tool itself (MS Access data base, version 2007 or higher) will be published at the project's website as soon as it has been accepted by the CENTRAL EUROPE programme secretariat. If you are interested beforehand, please contact Mrs Iris Wagner, University of Vienna, [iris.wagner@univie.ac.at](mailto:iris.wagner@univie.ac.at)

	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	habitatCode	patchCode	aCnt	Spec	aCnt	Ind	aIndexT	aMinT	aMaxT	aRangeT	aIndexM	aMinM	aMaxM	aRangeM	aSensitivity				
2	2330		5	2	3	3	3	0	1	1	1	0	2						
3	3150		8	8	2,5	1,75	3	1,25	3	3	3	0	2						
4	3270		4	3	3	2,5	3	0,5	2	2	3	1	2						
5	4030		15	9	3	1,75	3	1,25	1,25	1	2	1	2						
6	6120		13	7	2,75	1,75	3	1,25	1,25	1	2,5	1,5	2						
7	6410		25	21	2,5	2	3	1	2	1,5	3	1,5	2						
8	6430		26	25	2	1,5	3	1,5	2	1,75	3	1,25	2						
9	6510		17	17	2,5	2	3	1	1,75	1,25	2	0,75	2						
10	7110		24	21	2	1,5	2,5	1	3	1,75	3	1,25	3						
11	7140		23	20	2	1,5	3	1,5	3	2,5	3	0,5	3						
12	7230		27	24	2	1,5	3	1,5	3	1,75	3	1,25	3						
13	9160		10	10	3	1,75	3	1,25	1,75	1,25	2	0,75	2						
14	91D0		19	13	2	1,75	3	1,25	2,5	1,75	3	1,25	3						
15	91E0		28	26	2,5	1,75	3	1,25	2,5	1,5	3	1,5	3						

**HABIT-CHANGE** Indicator and Sensitivity Analysis  
adaptive management for protected areas

**01\_BNP Biebrza National Park, Poland**  
Biogeographic Region: Continental  CAMP Area  Remote Sensing

Overall Indicator and Sensitivity Values

Species Number: 244  
Cnt Indicator Values: 205  
Sensitivity: 2

Temperature: 2,5 1,5 3 1,5  
Moisture: 2,5 1 3 2

Insert Species and Values

Code	Patch	Comments	Index Values
			SEN TEMP MOIST
2330			2 3 1

Insert Values:

Datensatz: 1 von 15 |

Example of calculated sensitivity and indicator values exported into Excel sheet for the specific area under investigation (above) and query entry form (on the left)

## **Durban – another summit of disagreement**

### *Adaptive climate management measures even more in demand*

Sadly, as an outcome of the climate conference in Durban in December 2011 little cooperation, let alone pulling on one string, in tackling the reasons and impacts of climate change is to be expected in the years to come. At least three results are worth mentioning: The signees of the Kyoto treaty of 1997 agreed again on a mutual basis of working towards the goals of said treaty in a second round. However, three big greenhouse gas emitter bailed out of the deal – with Canada, Russia and Japan out of the boat, the relevance of the Kyoto treaty is severely reduced as the remaining countries still in on the treaty are only responsible for 15% of emissions worldwide.

The second outcome is that in 3 years time (i.e. 2015) a world climate contract shall be signed. This treaty is supposed to be compiled by all countries, not only the ones in support of the Kyoto treaty. But the already obdurate and loud discussion in regards to the binding force of such a treaty does not evoke much hope that they will actually succeed.

The third result is the establishment of an institutional structure of the Green Climate Fund, already suggested in Copenhagen in 2009, which will start distributing financial support to developing countries from 2020 onwards as it is anticipated that they will be the ones chiefly suffering from the effects of climate change.

Facing the long and vague space of time until the United Nations may be ready to agree on and implement a united strategy to fight climate change and its impacts, the situation will be even more desperate. Therefore research on climate change adaptation measures is already in demand now. A deeper understanding of the effects of climate change on habitats is in need in particular. This aspect was underlined at the international conference “For life, for the future – Biosphere reserves and climate change” which was held from 27<sup>th</sup> to 28<sup>th</sup> June in Dresden, Germany. Participants of 74 countries presented their investigation areas - among others two HABIT-CHANGE investigation areas were recognized as best practise examples (the biosphere reserve Vessertal in Thuringia, Germany and the biosphere reserve Danube Delta, Romania).

The conference’s result was the “Dresden Declaration”, which recapitulates the experiences with adaptive climate change management of all conference attendees. The declaration was endorsed in the UNESCO resolution at their general conference in November 2011.

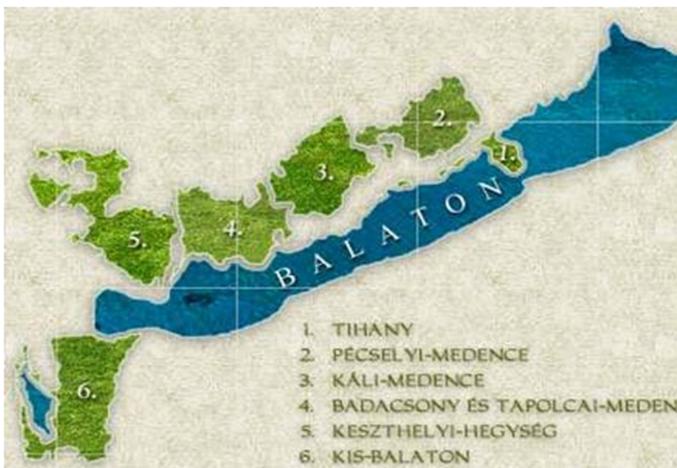
The results and experiences in regards to climate change adaptation measures gained within HABIT-CHANGEs diverse investigation areas are tremendously pertinent to implementing the call of the UNESCO resolution and the objectives formulated at the climate summit in Durban.

Forest conservation, reforestation, marsh restoration, remedial actions in alluvial plains and building dykes are just a few examples of measures that will be necessary to apply not only in conservation areas in the near future. Our results will help to make appropriate decisions for a wide range of habitat types under threat of climate change worldwide.

## Balaton Uplands National Park

The Balaton Uplands National Park is situated in the immediate vicinity of Lake Balaton, a place renowned all over Europe for its hospitable settlements and cosy holiday resorts. Thus it faces many challenges which are posed mainly by civilisation and development. Current tasks focus on the need to protect and preserve the natural and cultural treasures of an area of some 56,997 ha.

Within this area 14,397 ha have been designated a Ramsar Site and 11,282 ha form a strictly protected core. Five areas of the 6 parts of the National Park have been designated for detailed investigations within the HABIT-CHANGE project:



**The bottom part of the Tapolca Basin** which was once an inlet of Lake Balaton is a protected Natura 2000 site. During the 19th century nearly the entire lowland of the Tapolca Basin was enmeshed with artificial canals to drain the region and to desiccate areas being under water permanently or temporarily. As a result of this, water-demanding habitats of the basin started to dry out. The process had gone parallel with the deepening of subsurface water bodies, that contributed to the transformation of the landscape as a local impact of karstic water removal done for the sake of farther bauxite mining. Sluices were built for the regulation of the

movement of the water in some places. Smaller ditches dried out due to the decreasing level of inland waters, and some of the deeper canals have become shallower because of the fast sedimentation.

However, larger canals are still operating, thus establishing cross-directing links between streams of bigger flow rate (e.g. Tapolca-creek) and creeks that used to be completely dried out in the past (e.g. Viszlói-creek). Furthermore, gradual cessation of bauxite mining has resulted in the reviving of springs and an increased flow rate of the creeks. However, aridity and drought due to climate change cause further problems for nature conservationists working on saving the valuable habitats of the basin.

Owing to the diversity of microrelief and hydrological relations a diversity of habitats developed, including: semi-dry steppe meadows on the foot of hills and on heights of alluvial origin, large wet hayfields and pastures, isolated spots of fens and marshy meadows, riparian zone of watercourses, tree rows, forest patches and thickets are all rich in flora and fauna, and almost all of them are protected by law. *Molinia* meadows develop mostly on peaty or humous soils. Their dominant species are the tall moorgrass (*Molinia arundinacea*) and the Hungarian purple moorgrass (*Molinia hungarica*). At the end of spring, early summer we can meet with picturesque groups of the military orchid (*Orchis militaris*), the marsh orchid (*Orchis laxiflora ssp. palustris*), the early marsh orchid (*Dactylorhiza incarnata*) or those of the fragrant orchid (*Gymnadenia conopsea*).

Its survived stands are threatened by human activities (drainage, intensive grazing, afforestation) and by climate change (weeding, drying out, succession). Their conservation can only be attained by solving their optimal seasonal water supply and by their regular treatment e.g. mowing or grazing.

### Lesencetomaji fen (Tapolca Basin)

This investigation area is also under protection by law as by the end of the 70's several especially valuable rarities of the Hungarian flora became extinct – mainly due to human activities – from one-time fens and marshlands of the basin. The following species disappeared completely and are now only mentioned by literature data: the round-leaved sundew (*Drosera rotundifolia*), the common butterwort (*Pinguicula vulgaris*) and the alpine butterwort (*Pinguicula alpina*) are carnivorous plants which adapted to nitrogen deficient circumstances. This small fen fragment (cc. 5 ha) was their habitat. Nevertheless smaller or bigger populations of some very rare plant species still can be found, for example the only occurrence in Hungary of a „clear” population of the tall yellow compositae, *Senecio umbrosus*.



*Lemna minuta* at the Tapolca creek

The presence of alien warm water pondweeds (e.g. *Lemna minuta*, *Elodea canadensis*, *Elodea nuttallii*, *Hydrocotyle ranunculoides*, *Wolffia arrhiza*, *Hydrilla verticillata*, *Vallisneria spiralis*), is already a serious problem on certain streams (Tapolca-creek, Hevizi-canal) threatening to become even more severe as these streams are connected with others and the pondweeds could spread as far as into Lake Balaton. Yet we do not know deeply the behavior of these species and therefore it is difficult to take preventive measures against them. These streams are located also on protected Natura 2000 areas. Therefore, in order to examine and monitor structure of the flora and fauna of these streams, the involvement of specialists is required.

### Sasdi-meadow, Káli Basin

The bogs of this area are of outstanding botanical value and therefore a protected Natura 2000 site. In the Sásdi meadows (cc. 60 ha) west of Köveskál, we find the largest



*Primula farinosa ssp. alpigena*

population of the „fen subspecies” of the rare subalpine bird's-eye primrose (*Primula farinosa ssp. alpigena*) which is also part of the

emblem of the Balaton Uplands National Park; this plant can only survive in cool and humid places. Since its discovery (1989) lots of research and actions have been taken for its rescue.

Here the HABIT-CHANGE partners monitor and try to preserve the biodiversity by optimizing grazing and mowing. For this purpose it has been ascertained how many cattle days (number of days a group of cattle can be grazed on the meadow) are beneficial for the habitat and when it is better to mow the meadow.



Sasdi-meadow

### Tihany peninsula

The first landscape protection area established in Hungary gained European Diploma for its unique geological composition of postvolcanic formations. Two inland lakes increase the beauty of hillsides and mountains covered with vineyards and forests. The rare, valuable species of the fauna and flora being present here is a result of the mild, sub-Mediterranean climate. There are arid forests of oak, ash and sumac; one of the rare nesting birds of the peninsula is the horned sparrow owl and more than 1000 species of insects can be found including extremely rare butterflies such as *Iphiclides podalirius* and



*Wetland rehydration at Tihany*



*European ground squirrel*

*Catocala nupta*. To support the butterflies lavender has been introduced to the area but is also being used economically. The conservation aims of the national park directorate includes the revitalisation of the wetlands and the management of pastures. For the latter purpose ground squirrels or souslik (*Spermophilus citellus*) have been introduced successfully in 2003. They coexist with Hungarian Grey Cattle, typically used in this area. Now it serves as a stock population for further souslik re-introduction projects. Due to the optimised grazing the number of grass species has been developed from 39 to 61. A further challenge in this area is water management. There is a need to keep up the ground water level to avoid dry-out and the consequences of changing vegetation and invasive xerophilous species.

### Kis Balaton

The Kis-Balaton (Little Balaton), a spacious conglomerate of marsh reeds and open water surface, is under the protection of the Ramsar Convention and is a Natura 2000 conservation area. The area has a particularly rich flora and fauna, which is famous all over Europe especially its bird life. It is home to



*Kis-Balaton*



*Invasive water plants*

250 bird

species, among which 27 species are strictly protected. The site is a combination of two standing water bodies (Fenékítő and Hídvégi-tó) which are fed by water of Zala River and acts as a biological filter for the Balaton by circulating the water for about 30 days. However, the diversity of birds is threatened as Zala River causes the water level to rise, already resulting in the loss of reeds which can only grow in a certain depth of water and so far have served as a valuable habitat, now making way for open water surface.

As a measure to preserve this habitat the national park directorate plans to puncture the dyke and flood neighbouring areas to lower the water level in the Kis-Balaton and increasing its territory at the same time.

## Workshop on Stakeholder Involvement 5<sup>th</sup> – 6<sup>th</sup> of October 2011, Bled, Slovenia, Triglav National Park Region

The 1<sup>st</sup> day started with a welcome speech by Martin Šolar, Head of the Triglav National Park (TNP). The opening of the workshop was continued by Mojca Vrhunec presenting the Triglav National Park to the audience. Then project coordinator Sven Rannow announced the objectives of the workshop. Afterwards Mateusz Grygoruk presented his experiences on stakeholder involvement in Biebrza National Park, the biggest NP in Poland. Afterwards Oscar Zarzo Fuertes talked about stakeholder involvement and climate adapted management plans (CAMPs). He presented definitions of the term stakeholder and discussed why the involvement is important. In addition objectives, forms of stakeholder participation, identification and classification of stakeholders and stakeholder involvement in the CAMP



Participants of the workshop

process were presented. A discussion about stakeholder involvement and CAMPs followed at which all participants presented events, objectives, stakeholders and topics. Then Nina Uratarič from REC Slovenia presented how to organize a stakeholder engagement event and their experiences. The main principles are efficiency, inclusiveness, transparency and effectiveness. Stakeholder engagement is important to raise their interest to influence the planning processes, it increases the quality of solutions and encourages the change of behaviour. Later on external guest Patricia Germandi from Senckenberg world of biodiversity shared her experiences and valuable insights on how to communicate climate change. Senckenberg is organizing different interesting science and eco exhibitions which are attractive to general public, schools, families, young people, scientific community, politics and economy and media with the objectives to raise awareness for the nature, to inform about scientific projects and to motivate young people for science. The last presentation of the first day was held by Sven Rannow about communication strategies for the project. The goal of stakeholder involvement in HABIT-CHANGE is to contribute to awareness rising, climate change adapted management plans and dissemination of project results.



The 2<sup>nd</sup> day started with a presentation of ideas for HABIT-CHANGE exhibitions - exhibit planning and design and interpretive tours (live and self-guiding services) by John Veverka, who is one of the worlds leading heritage interpretation experts. He presented facts about interpretation, communication principles and the interpretive planning model. To interpret climate change in the parks, visitors need to have a first-hand experience in the park that clearly demonstrates the changes. He presented examples of interpretive media options, exhibits (interior and on trails), audio (cell phone) and guided tours. Following this Sven Rannow presented other media tools for awareness rising and he then closed the workshop with a summary and to Do's.

## **HABIT-CHANGE - A multi-disciplinary team**

Research on climate change and its effects on the environment is as complex as climate change itself. Therefore within the HABIT-CHANGE project researchers from various fields of science work together to share their expertise and experiences to tackle the multi-faceted problems in climate change research and link expert knowledge of:

Forestry, Remote Sensing, Vegetation Ecology, Legal Expertise, Hydrology, Climate Modelling, Nature Protection, Geography, Site Management, Botany, Limnology, Landscape Planning, Environmental Engineering, Soil Science, Ornithology, Geographic Information Science, Landscape History, Nature Restoration

Our project partners are:

Leibniz Institute of Ecological and Regional Development (IOER - Lead Partner), Germany; University of Vienna (UniV), Austria; National Academy of Sciences, Scientific Centre for Aerospace Research of the Earth (CASRE), Ukraine; Thuringian State Institute for Forestry, Game and Fishery (TLWJF), Germany; Potsdam Institute for Climate Impact Research (PIK), Germany ; Technische Universität Berlin (TUB), Germany; Balaton Uplands National Park Directorate (BUNP), Hungary; Szent Istvan University (SIU), Hungary; Biebrza National Park Administration (BNP), Poland; Environmental Protection Institute (IOS), Poland; Triglav National Park Administration (TNP), Slovenia; University of Bucharest (UniB), Romania; Central Institute for Meteorology and Geodynamics (ZAMG), Austria; Danube Delta National Institute for Research and Development (DDNI), Romania; SOLINE Pridelava soli d.o.o. (NP SES), Slovenia; University of Maribor (Uni MB), Slovenia; European Academy Bolzano (EURAC), Italy;

Furthermore there are 24 associated institutions working together with our partners.

### **Erratum**

Having been made aware that we did not name the organisers of the partner meetings and workshops mentioned in the first issue of our newsletter, we would like to apologise for this mistake and provide the information belated here:

-  The Kick-Off Meeting in Osowiec-Twierdza/Goniadz, Biebrza National Park, Poland was jointly organised by the Biebrza National Park Administration and the Environmental Protection Institute.
-  The 2<sup>nd</sup> Partner Meeting in Illmitz, Austria, Lake Neusiedl/Fertö-Hanság National Park Region was jointly organised by University of Vienna, the Lake Neusiedl National Park Administration and the North Transdanubian District Environment and Water Directorate.
-  The Stakeholder workshop "Climate induced changes and land management in protected areas" was organised by Biebrza National Park Administration.
-  The 3<sup>rd</sup> Partner Meeting at Sečovlje Salina Nature Park, Portoroz, Slovenia was jointly organised by Sečovlje Salina Nature Park Administration and University of Maribor.
-  The 4<sup>th</sup> Partner Meeting at Balaton Uplands National Park, Balatonfüred, Hungary was jointly organised by Balaton Uplands National Park Administration and Szent Istvan University, Department of Nature Conservation and Landscape Ecology

For further information on the HABIT-CHANGE project please visit [www.habit-change.eu](http://www.habit-change.eu)  
If you wish to receive the HABIT-CHANGE newsletter please register at  
<http://www.habit-change.eu/index.php?id=30>

Feedback and comments to this newsletter are highly appreciated. Please contact [F.Schmidt@ioer.de](mailto:F.Schmidt@ioer.de)



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