INTERNATIONAL MIRE CONSERVATION GROUP

NEWSLETTER

issue 2006/1, April 2006

The International Mire Conservation Group (IMCG) is an international network of specialists having a particular interest in mire and peatland conservation. The network encompasses a wide spectrum of expertise and interests, from research scientists to consultants, government agency specialists to peatland site managers. It operates largely through e-mail and newsletters, and holds regular workshops and symposia. For more information: consult the IMCG Website: http://www.imcg.net

IMCG has a Main Board of 15 people from various parts of the world that has to take decisions between congresses. Of these 15 an elected 5 constitute the IMCG Executive Committee that handles day-to-day affairs. The Executive Committee consists of a Chairman (Jennie Whinam), a Secretary General (Hans Joosten), a Treasurer (Philippe Julve), and 2 additional members (Tatiana Minaeva, Piet-Louis Grundling).

Viktor Masing (†), Hugo Sjörs, and Richard Lindsay have been awarded honorary membership of IMCG.

Editorial

This Newsletter contains the first preparations for this year's IMCG General Assembly in Finland. In the coming months we will organize the discussions on important decisions to be taken there. As we again want to discuss and vote per mail, to enable all IMCG members to participate, it is important to send in your contributions (including nominations for the Main Board) to the Secretariat before July 1st 2006. Furthermore this Newsletter gives additional information of the field excursion in the weeks before the Conference. Have you already registered for the Conference?

An important event this year will also be the SER Conference on Ecological Restoration, in which IMCG is heavily participating and which has a major focus on peatlands, both in the presentations as well as in the conference excursions. We publish background information on the excursions to enable you to make an optimal choice. But hurry with signing up, because also here deadlines must be held.

Good news this time from Siberia, where Tomsk Oblast has just decided to put *half a million* ha of the Great Vasjugan Mire under nature conservation. A major achievement of our Russian colleagues, that deserves to be continued in the other oblasts over which Vasjugan is extending.

Please send all your proposals, discussion contributions, news, publications, etc. to us, and with your help we will again prepare an interesting Newsletter. Deadline for the next Newsletter is July 1st 2006.

For information or other things, contact us at the IMCG Secretariat. Address updates should be sent to Jan Sliva: sliva@wzw.tum.de. In the meantime, keep an eye on the continuously refreshed and refreshing IMCG web-site: http://www.imcg.net

John Couwenberg & Hans Joosten, The IMCG Secretariat
Botanical Institute, Grimmerstr. 88, D-17487 Greifswald (Germany)
fax: +49 3834 864114; e-mail: joosten@uni-greifswald.de

Contents:

The IMCG bank acount : IBAN Number : FR76 1670 6050 0750 5170 9901 686; Bic Number (=swift) : AGRIFRPP867;
Name : Ass. International Mire Conservation Group; Address : 159 rue Sadi Carnot 59280 Armentières (France)

ISSN 1682-1653

General Assembly Finland 2006

Nominations for the IMCG Main Board

On our General Assembly in Finland we have to elect a new IMCG Main Board. In order to guarantee an effective democratic election process involving all members, nominations have to be submitted to the Secretariat before 1 July 2006, so that ballots can be sent out in time to allow email and postal voting.
Please send your nomination (incl. a short description of your backgrounds, your activities in, and vision on mire conservation) to the Secretariat.

On the IMCG General Assembly on Thursday 27 July 2006 in Eerikkilä (Finland) only a limited number of IMCG members can be present, and only limited time will be available. Therefore we will arrange the discussions and decisions largely by internet and (e)mail, like we have done with the 2002 and 2004 General Assemblies.
This Newsletter contains the agenda for this Assembly (that will be available on our website as well) and in the beginning of July we will produce a Newsletter containing the full documents for the Assembly and all information on how the voting per email or snailmail will be done. We will furthermore open a special site on our website where all drafts of discussion papers will be made available.
Therefore: provide the IMCG secretariat with additional (minor) agenda points and submit your background papers, concrete proposals, contributions for discussion, nominations for the IMCG Main Board etc. until 1 July 2006. Sent the material in as soon as possible – the sooner the better – so that we can arrange the democratic procedures in a smooth way.

The agenda of the IMCG General Assembly is as follows:

1. Opening and Welcome
2. Minutes of the General Assembly of 26 September 2004 in Paarl (see IMCG Newsletter 2004/4)
3. Balance sheet and the statement of profit and loss
4. Biennial report on the state of affairs in the IMCG and on its policy, including an evaluation of the Action Plan 2002 - 2006
5. IMCG Action Plan 2006 - 2010
6. Membership fee
7. Election of the Main Board
8. Conference resolutions
9. Information on next venue 2008 in Georgia; agreement on venue 2008
10. Any Other Business

IMCG Resolutions

Submit your draft resolutions!
The IMCG General Assembly in Finland 2006 will again discuss and adopt resolutions. To streamline the procedure, IMCG members are requested to submit their draft resolution timely, i.e. as soon as possible, to the IMCG secretariat. This will enable to circulate the draft resolutions among the Main Board, to publish the necessary background information in the IMCG Newsletter of July 2006, and to put the drafts on our website so that everybody can send reactions (to the IMCG Secretariat).
Draft resolutions should identify the apparatus and bodies to which the resolution has to be directed or sent. Examples (phrasing and content) of resolutions can be found on the IMCG website (www.imcg.net/imcgdocu.htm).
Resolutions are not always taken at heart by the governments they are addressed to. Yet resolutions remain a strong tool to influence government policies, the more so with the increasing strength of IMCG on the global peatland front.

Meeting IPS/IMCG

Associated with the IMCG General Assembly in Finland there will be the annual meeting between the International Peat Society (IPS) and the IMCG to discuss global peatland issues, joint projects (e.g. the new Mires and Peat journal that will be officially launched at that occasion) and further joint initiatives. The meeting will take place on Friday July 28, 2006, in Hotel Meripuisto in Espoo (half an hour drive west from Helsinki airport).
Members who are interested to participate, please contact the IMCG secretariat: joosten@uni-greifswald.de

Meeting CoCoGAP

Possibly, also a meeting of the Coordinating Committee for Global Action for Peatlands (CoCoGAP) of the Ramsar Convention will be held associated with the IMCG General Assembly in Finland. The meeting is preliminarily planned for Saturday July 29, 2006, in Hotel Meripuisto in Espoo (half an hour drive west from Helsinki airport).
For more information contact Tobias Salathe: salathe@ramsar.org

12th Biennial IMCG Field Symposium and General Assembly, Finland 2006

by Raimo Heikkilä and Tapio Lindholm

Arrangements for the IMCG Field Symposium and General Assembly are progressing well. The excursion is booked full, and thus far there are about 70 registrations for the conference. We have received a number of abstracts, and expect to get the rest in the very near future. Altogether there will be about 40 presentations and 15 posters.
The excursion guidebook (titled "Finland, Daughter of the Baltic") is receiving its final editing, and the layout for another book about nature in Finland (titled "Finland, land of mires") is being prepared.
Below you may find information about the excursion and the numerous Finnish mire experts guiding you. There are also links to websites of our accommodations. Unfortunately, most websites are in Finnish only, but we hope that you find the pictures informative nonetheless.

Updated field symposium schedule with tentative list of guides

Thursday 13th July
Opening of the field symposium in the evening in Nature Centre Kellokas in Äkäslompolo; mire exhibition.
Hosts: Eero Tikkanen, Natural Heritage Services (NHS) (state organization managing nature reserves as well as biodiversity issues in all state forests), Pekka Salminen, Nature conservation councellor, Ministry of the Environment (ME), Heikki Susiluoma, chairman of the Finnish Nature Conservation Association. (FNCA) and Eero Kaakinen, head of nature conservation, North Ostrobothnia Regional Environment Centre (NOREC)

Overnight stay in holiday resort Seita in Äkäslompolo (www.seitahotelli.fi)

Guides during the whole excursion: Raimo Heikkilä, Aulikki Laine, Tapio Lindholm and Tapani Sallantaus (Vegetation, flora, conservation, restoration, ecohydrology)

Friday 14th July
Kolari, Teuravuoma: large aapamire of the main aapamire zone. Long walk along path and wooden boardwalk. Mire ecotourism. Guides: Eino Lappalainen (emeritus leading state geologist), Yrjö Norokorpi (NHS, cultural heritage), Päivi Paalamo (NHS, flora), Pauliina Kulmala (NHS, restoration and management), Elisa Pääkkö (NHS, biotope inventories, management plans), Joel Erkkonen (NHS, ecotourism, visitor facilities), Tuomo Ollila (NHS, bird fauna, large predators), Heikki Susiluoma (FNCA, experiencing the mires), Eero Kaakinen (NOREC, conservation issues)

Bus tour along Tornionjoki river valley, cultural objects.
Overnight stay in Simo, Bothnian Bay coast, hotel Wanha Pappila (Old Vicarage www.wanhapappila.com).

Saturday 15th July
Tervola, Karhuaapa: calcareous rich fens, rich flora, conservation problems, restoration. Guides: Yrjö Norokorpi, Päivi Paalamo, Pauliina Kulmala, Hanna Kondelin (Joensuu University, rich fen vegetation), Eero Kaakinen, Seppo Vuolanto (ME, Ramsar issues)

Karhuaapa spring

Simo, Martimoaapa: Ramsar site, large aapamire and eccentric bog, bird fauna. Guides: Yrjö Norokorpi, Päivi Paalamo, Pauliina Kulmala, Hanna Kondelin, Eero Kaakinen, Seppo Vuolanto, Esa Härkönen (NHS, bird fauna), Ari Rajasärkkä (NHS, bird fauna)
Overnight stay in Wanha Pappila

Sunday 16th July
Kuivaniemi, Sahkari and Ihanalampi: Land uplift area on moraine soils, succession of young mires, rich fens, ecohydrology. Guides: Sakari Rehell (NHS, vegetation succession, ecohydrology), Hanna Kondelin, Eero Kaakinen, Seppo Vuolanto

In the evening presentation about peat mining and conservation conflicts, Merja Ylönen (FNCA). Overnight in Wanha Pappila.

Monday 17th July
Ylikiiminki, Hirvisuo: Aapamire of sedge aapa zone, bird fauna, vegetation, ecohydrology. Guides: Jarmo Laitinen and Antti Huttunen (Oulu University, vegetation, morphology, ecohydrology), Sakari Rehell, Hanna Kondelin, Ari Rajasärkkä, Päivi Virnes (NHS, restoration), Eero Kaakinen, Seppo Vuolanto

Pudasjärvi, Olvassuo: Ramsar site, Proposed UNESCO World Heritage site, aapamire, restoration, ground water pumping, reindeer herding. Guides: Jarmo Laitinen, Antti Huttunen, Sakari Rehell, Hanna Kondelin, Ari Rajasärkkä, Päivi Virnes, Markku Lehtelä (NHS, restoration), Eero Kaakinen, Seppo Vuolanto

Overnight stay in hotel Rekihovi in Utajärvi (www.rekihovi.com, in Finnish only).

Tuesday 18th July
Liminka, Liminganlahti: Ramsar site, land uplift, paludification, shoreline vegetation, bird fauna, flora. Guides: Ari Rajasärkkä, Jorma Pessa (NOREC, bird fauna, conservation), Eero Kaakinen, Seppo Vuolanto

Siikajoki and Raahe towns: Culture and history, old wooden town

Siikajoki, Hummastinvaara: Land uplift on poor sand soil, young mires, vegetation, flora, carbon balance. Guides: Sakari Rehell, Eero Kaakinen, Seppo Vuolanto, Kari Kukko-oja (Forest Research Institute, vegetation, carbon balance), Mirva Hietala (Forest Research Institute (Carbon balance)

Photostop in Revonneva mire, large eccentric bogs and aapamires, road through the mire

Evening reception given by NHS, NOREC, Council of Oulu Region and Ministry of the Environment. Presentation about regional land use planning by mr. Ismo Karhu, chief of environment issues, Council of Oulu Region. Illustrated history of IMCG symposia and excursions: Lebrecht Jeschke and Richard Lindsay.

Overnight stay in hotel Vihiluoto, Oulu (www.hotellivihiluoto.fi, in Finnish only)

Wednesday 19th July
Oulu town, culture and history, possibility for shopping.
Four hours drive to the south from Oulu through the very plain western Finnish lowland. Problems of forestry drainage along the route. Guides: Seppo Vuolanto, Pekka Salminen (ME, conservation questions)

Overnight stay in cottages in Lake Valkeinen camping in Lestijärvi (www.valkeisjarvenleirintaalue.fi, in Finnish only)

Thursday 20th July
Perho, Salamajärvi national park: Ramsar site, southern aapamires, locus classicus for aapamire definition, mire site type and complex classification, mosaic of forest and mire, wild forest reindeer, outdoor recreation. Long walk along wooden boardwalk. Guides: Pekka Salminen, Seppo Vuolanto, Anneli Suikki (NHS, conservation and restoration), Raimo Itkonen (NHS, conservation), Reijo Kuosmanen (NHS, wild forest reindeer)

Salamajarvi

Lapua, Alajoki: Mire cultivation, agricultural history, scenery, flood control.

Overnight stay in hostel Lapua Christian Institute (http://www.lapua.fi/matkailu/kohteet/?ryhma=4&kohdeid=44, in Finnish only)

Friday 21st July
Laihia, Levaneva: Ramsar site, large bogs and aapamires, water reservoir on mire, cultural history, hunting and poaching, vegetation, bird fauna. Long walk along wooden boardwalk. Guides: Heikki Susiluoma (FNCA, man in mires), Reijo Hokkanen (NHS, conservation, visitor facilities), Niina Pirttiniemi (Western Finland Regional Environment Centre, conservation, land use history), Pekka Salminen, Seppo Vuolanto

Isojoki, Lauhavuori national park: geomorphology, ecohydrology, eccentric bogs, springs, vegetation, flora, highest point in Western Finland. Guides: Pekka Vesterinen (NHS, conservation and restoration), Pekka Salminen, Seppo Vuolanto

Overnight stay in cottages at Nummijärvi Camping, Kauhajoki (http://www2.kauhajoki.fi/camping/, in Finnish only)

Saturday 22nd July
Kauhajoki, Kauhaneva national park: Ramsar site, Bogs and aapamires, vegetation, flora, bird fauna. Guides: Pekka Vesterinen, Pekka Salminen, Seppo Vuolanto

Parkano, Seitseminen national park: Restoration, history of forestry and agriculture. Guides: Pekka Vesterinen, Seppo Kallonen (NHS, fauna), Teemu Tahvanainen (NHS, restoration)

Overnight stay in Hotel Ellivuori, Karkku (www.ellivuori.fi)

Sunday 23rd July
Kokemäki, Puurijärvi national park: wetland site important for birds. Guides: Pekka Salminen, Seppo Vuolanto

Perniö, Punassuo: southern bog, structures, vegetation, flora. Guides: Kimmo Tolonen (professor emeritus, vegetation, development history), Pekka Salminen, Seppo Vuolanto

Tammisaari, Harpar Storträsk: hemiboreal vegetation, flora and succession. Guides: Kalevi Keynäs (FNCA, flora, conservation), Pekka Salminen, Seppo Vuolanto

Overnight stay in Eerikkilä Sports Institute (www.eerikkilasport.fi)

Conference schedule
Monday 24th July
Eerikkilä sports institute, oral presentations and posters. Banquet with cultural programme, Fennougrian ethnic music group Inehmo

Tuesday 25th July
Field excursion to nearby Liesjärvi and Torronsuo national parks: large bogs, spruce mires, mire restoration. Visit to Tammela Nature Centre with a mire exhibition. Guides: Annamari Ilola (NHS, conservation), Kaisu Aapala (Finnish Environment Institute (restoration of mires), Harri Tukia (Finnish Environment Institute, restoration of forests)

Torronsuo

Wednesday 26th July
Eerikkilä Sports Institute, oral presentations and posters

Thursday 27th July
Eerikkilä Sports Institute, IMCG General Assembly followed by press conference

Peatland restoration manual

As reported before (IMCG Newsletter 2005/2) the IMCG is a partner in the UNEP-GEF project "Integrated management of peatlands for biodiversity and climate change". The project asked IMCG to assist in delivering one of its key products: a global handbook on peatland restoration.

As you will understand, a handbook that is relevant for all aspects of peatland restoration for all regions of the world is complicated to conceive. Therefore it took much effort to think of an approach that may provide the required conceptual and technical information without ending up in a confusing tangle of facts and methods.
In week 15 (half April) we plan to put the results so far on the IMCG website, where we hope to receive your critical comments, additions, and ideas.

Eventually we want to extend this initiative to a kind of peatland *restopedia*, a web-based instrument that can actively be accessed to share knowledge and experience worldwide.
For more information, contact Martin Schumann: Martin.Schumann@uni-greifswald.de

The Golden Fleece in trouble - the endangering of the Kolkheti peatlands (Georgia)

by Matthias Krebs & Hans Joosten

"As to the inhabitants of Phasis, their country is fenny, warm, humid, and wooded; copious and severe rains occur there at all seasons; and the life of the inhabitants is spent among the fens; for their dwellings are constructed of wood and reeds, and are erected amidst the waters"

Hippokrates (460 – 375 BC):
On Airs, Waters, and Places

http://herodot.georgehinge.com/aer.html

The peatlands of the Kolkheti lowland (in ancient times called Phasis) comprise the major part of the peatlands of Georgia (Kobulija 1974). They consist of approximately 11,000 ha of open peatland and 23,000 ha of peat swamp forests. The diversity of peatlands and partly still pristine mires in this ancient cultural landscape is unique (Joosten et al. 2003). The abundant and rich peatland cover can adequately be described as the natural 'Golden Fleece' of Kolkheti, after the old legend of Jason and his Argonauts who had to retrieve the fleece of a wonder-working golden ram, that was in the possession of the mighty king Aeetes of Kolchis and guarded by a formidable dragon (Lordkipadnidze 2001). Jason only succeeded in his undertaking because Medea, the oldest daugther of king Aeetes, fell in love with him and helped him by betraying her father and killing and dismembering her brother.

The peatland Golden Fleece of Georgia is currently being damaged and threatened to be stolen by new Jasons, helped by new Medeas. The 2008 IMCG field excursion and General Assembly is planned to be held in Georgia. Here we present an overview of recent developments as a preparation to what we might expect to find.

Human impact

The millennia long joint history of humans and peatlands in the Kolkheti lowlands is not only evidenced by many historical Greek records, but also by the abundance of archaeological findings in and around the mires (e.g. Vickers & Kakhidze 2004). Large-scale destructive human impact on the Kolkheti mires started at the end of the 19th century. Especially since the collapse of Soviet Union the pressure on the Kolkheti lowland rapidly increased (Joosten et al. 2003).

In the last years the economical situation is slowly improving, but the threats on the peatlands are still present (see Joosten et al. 2003) and even increasing. The government of Georgia is understandably focussing on economic development and pays less attention to environmental regulations and gives little priority to environmental sustainability. Also the actual reorganisation of the government has not contributed to an efficient institutional structure of the Ministry of Environment (MOE).

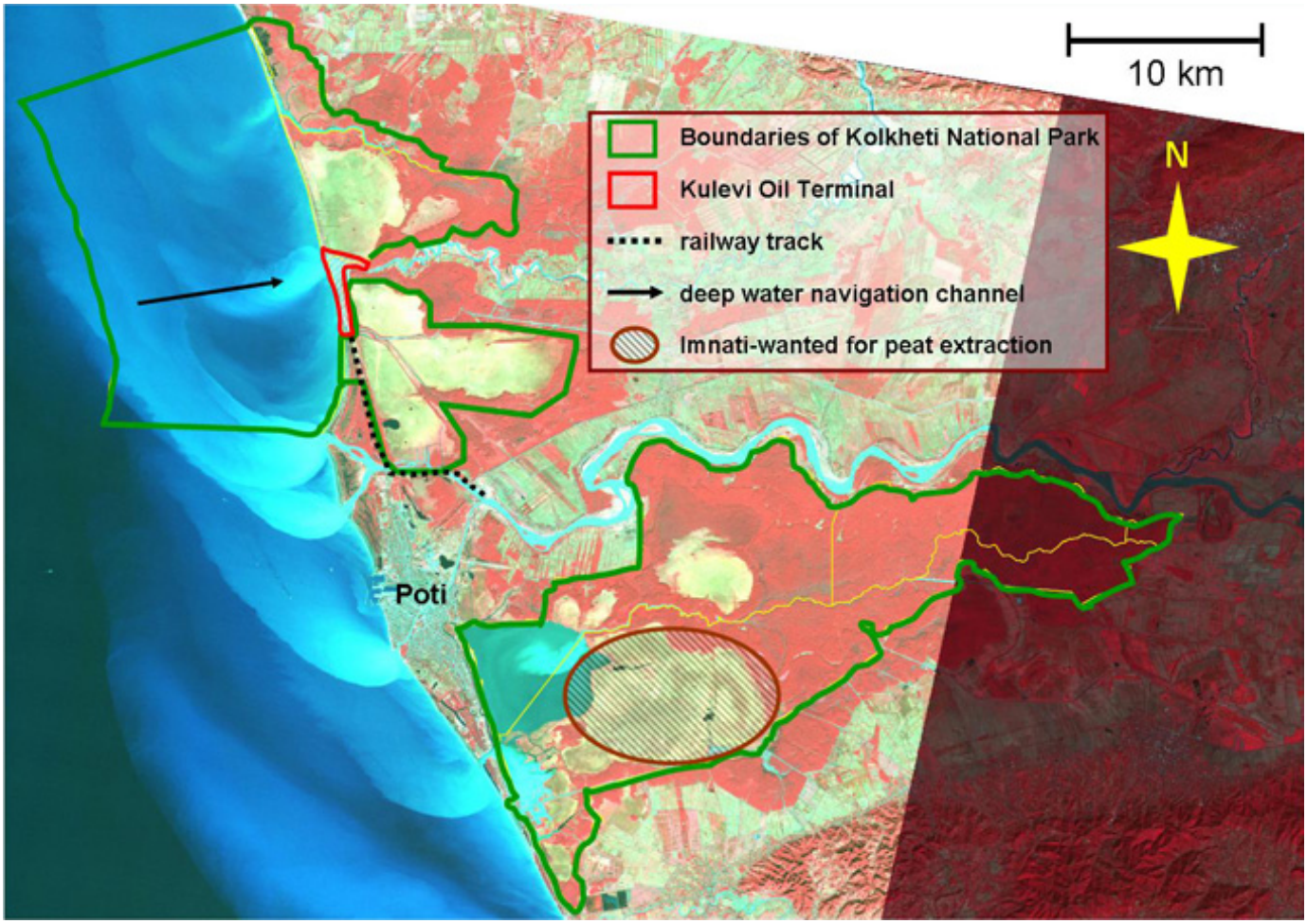
Under such conditions, where the regulatory framework of land use is weak and a consistent masterplan is missing, conflicts between economic and environmental objectives can easily develop.

Kulevi terminal

One example is the construction of the Black Sea oil terminal close to the settlement Kulevi at the Black Sea coast. The area it occupies and the infrastructure it requires, including a deep water navigation channel for tankers and a railway for land transport, destroy and damage areas of global importance. These damaging activities also take place in areas that are designated as the Kolkheti National Park (KNP) and as the Central Kolkheti Wetlands Ramsar Site (N°893). The government justifies its choices with "urgent national interests".

The construction of the terminal is one of the largest projects in Georgia. It has an investment volume of USD 1 billion and involves a staff of 1500 people during construction and 600 persons for continued exploitation. In September 1999 a presidential decree authorized the construction of the oil terminal by Terminal 2000 Ltd, a partnership created between Argomar Oil Ltd (at that time registered in Cyprus) and Georgian Railways (Kochladze 2002, Rimple 2005). The construction work started without the required environmental and construction permits (such as an Environmental Impact Assessment EIA). In September 2001 the work suddenly stopped because of financial problems. In September 2004, a renewed start was made with as main investor the Black Sea Terminal Ltd (a company of Georgian investors lead by Badri Patarkazishvili) and an international consortium including the former main investor Argomar Oil Ltd. In spite of it being a huge project, not much is known about the investors behind the project and details remain unexplained. Argomar Oil Ltd was recently registered in Austria, but is meanwhile again in liquidation (www.compnet.at/html/index394.html [05.04.2006]).

The operational phase shall start in September 2006. The complex will occupy about 100 ha for oil product storage, loading, and shipping facilities (Salathé 2005). 19 oil tanks of 20,000 m^3 each will store the oil and oil products (e.g. bitumen, mazud, diesel, petrol) that Chevron and other oil companies will supply by railway from Azerbaijan, Turkmenistan and Kazakhstan. In Kulevi the oil will be shipped into huge tankers for further export via the Black Sea with an annual volume of 20 to 30 million tonnes. The necessary facilities at the terminal area are currently under construction with more than 70% of the tank structures already in place and substantial works in altering the estuary of the river already carried out (Salathé 2005). Plans exist to also handle liquefied petroleum gas (LPG) in future, but no further information exists about the construction of gas pipelines.



Kolkheti National Park and threatened areas

Churia peatland close to the Black Sea coast, before *port construction works*

Churia peatland close to the Black Sea coast, during *port construction works*

The port under construction is situated in the mouth of the Khobistskali river. Its expanse of 300 x 800 m and its depth of 28m destroy the natural estuary as well as parts of the Churia peatland that is part of the Kolkheti National Park and Ramsar Site. Own observations in October 2005 revealed that damage from the port construction works already extend 1000m from the coast upstream parallel to the river.

The port will comprise three loading places for tankers with storage capacities of 100,000 and 65,000 tonnes and for smaller ships. Kulevi port will be one of the deepest ports in the Black Sea. For the huge tankers to access the port, a 28 m deep water

navigation channel has to be dredged inside the marine part of the Kolkheti National Park and Ramsar Site.
Many questions remain. How will the terminal pay the high operational costs? Could a link exist between the terminal construction and the local oil fields close to Supsa (i.e. within the KNP) or in the Chaladidi region, that were explored in the 1960s and exploited till the beginning of the 1970s and whose exploitation stopped for unknown reasons?

Railway construction
Another construction that infringes on Georgian environmental laws, World Bank agreements, and the Ramsar Convention is the establishment of a railway for oil transport to connect existing infrastructure with the Kulevi terminal (Rimple 2005). The new 12.5 km long railway will start from an existing track close to the city of Poti (Salathé 2005) and run along the border of the KNP. Whether it will indeed cross the National Park is unclear, as the demarcation of the park boundaries in that part of the National Park is under revision...

Compensation
In August 2005 the terminal construction and the possible damage to the Ramsar Sites were focus of the Ramsar Advisory Mission No. 54, that pointed to the failing environmental investigations and that expressed the necessity of a close cooperation between the Ramsar Secretary and the World Bank as advisers and the Ministry of Environment as control authority (Salathé 2005). The impairment of the Ramsar site will also require studies how and where the damage can be compensated. Endangered ecosystems can only be conserved by an effective and powerful nature protection system like the Kolkheti National Park. Long-term support of the National Park could be made available through the establishment of a specific Heritage Fund, financed by the Black Sea Terminal Ltd and managed by wetland and marine experts and representatives of the Government (MOE), the Black Sea Terminal Ltd., and environmental NGOs (Salathé 2005).
The oil terminal has engaged two firms to complete the missing environmental investigations. Zenith Gamma Consultants works out the Environmental Impact Assessment (EIA) and the oil spill monitoring during terminal construction and operation, whereas Acta Consultants studies the options for wetland compensation under the Ramsar Convention. The reports to the Ministry of Environment of Zenith Gamma were unsatisfactory (Salathé 2005), a detailed EIA for the terminal's marine works and a mitigation plan are still missing.

Peat extraction
Despite its status as National Park and Ramsar site, also the largest peatland of Kolkheti, the largely pristine and highly valuable Imnati mire, is threatened. After eager eyes from the Middle East, lately a Danish peat company is exploring the perspectives to extract peat from this area. The company tries to make its plans politically attractive by promising local employment in the production of growing media. This mire, however, is one of the two globally identified *Sphagnum* percolation bogs (Haberl et al. 2006) and peat extraction should be out of the question.

The largely pristine and highly valuable Imnati mire, one of two Sphagnum *percolation bogs thus far identified world-wide*

Road construction
The second *Sphagnum* percolation bog Ispani 2 (Kaffke et al. 2000) situated in the South of the Kolkheti lowland in the Kobuleti Managed Reserve is threatened by road construction close to the peatland (Matchutadze & Krebs 2003). The plans are still on the agenda of the Ministry for Construction and only not implemented because of missing finances. Which effects the road will have on the peatland is unclear. That's why an EIA is required and alternative tracks must be identified to prevent damage to this worldwide unique piece of Georgian nature.

Future developments
These examples show that – in spite of their conservation status - unique peatlands all over the Kolkheti lowland are in acute danger. The good work of the Georgian Integrated Coastal Zone Management Programme (GICMP, financed by World Bank/GEF) in implementing the Kolkheti National Park and the Kobuleti Nature Reserve will be jeopardized, if short-sighted and obscure economic interests continue to have higher priority than unique ecosystems of national and international importance.

Some keystones and key issues for future developments include:
– The Law for the Establishment and Management of Kolkheti Protected Areas has passed the Parliament. After registration by the Ministry of Justice, the KNP will have the status of a Legal Body of Public Law giving it more opportunities to acquire revenues.

- Ms. Sophiko Akhobadze, Deputy Minister of Environment of Georgia, is now member of the Standing Committee of the Ramsar Convention for the period 2005-2008.
- The GICMP will run out in June 2006. A good strategy is needed to guarantee the continuation of adequate management of the protected areas and to ensure that the accumulated expertise is maintained and further developed.
- The regulatory framework of a land use master plan is needed to prevent further incoherencies and potential environmental disasters (Salathé 2005).
- The Ministry of Environment has to ensure that the environmental permitting conditions for construction works like the Kulevi railway are kept.
- An adequate compensation package for the damage done has to be developed and implemented.
- Special attention has to be paid to the establishment of buffer zones around the National Park and Nature Reserve, where traditional human uses can be continued at sustainable levels (Salathé 2005).
- The perspectives of *Sphagnum* farming as a new sustainable and adapted activity in the surroundings of the reserves should be studied to combine economic and environmental interests (Krebs & Gaudig 2005, Haberl et al. 2006).

The future of the Golden Fleece of Georgia is now at a critical point. Steps to protect the unique peatland heritage have been taken, but myopic economic interests supported by an intransparent locale are concurrently counteracting the tender development towards ecological and economic sustainability.
The question is, what will be in 2008? Will Georgia continue sacrificing its peatlands for short-sighted economic profits and follow the regrettable example of Western Europe that destroyed over 95 % of its mires (Joosten & Clark 2002)?
Or will the mighty Georgian kings and formidable Ramsar dragons be able to withstand the stinginess of the modern Jasons and the treacherousness of the modern Medeas and encourage socio-economic development that incorporates the unconditional protection of the Kolkheti Golden Fleece?...

References

Haberl, A., Kahrmann, M., Krebs, M., Matchutadze, I. & Joosten, H. (2006): The Imnati mire in the Kolkheti lowland (Georgia), Peatlands International 2006/1, in press.
Joosten, H. & Clarke, D. (2002): Wise use of mires and peatlands – Background and principles including a framework for decision-making, International Mire Conservation Group / International Peat Society, 304 p.
Joosten, H., Kaffke, A. & Matchutadze, I. (2003): The mires of the Kolkheti lowlands (Georgia), International Mire Conservation Group Newsletter 2003/3, S.19-23.
Kaffke, A., Couwenberg, J., Joosten, H., Matchutadze, I. & Schulz, J. (2000): Ispani II: the world's first percolation bog, In: Québec 2000 Millenium Wetland Event, Program with Abstracts, p. 487.
Kobulija, G.S. (1974). Osuschenie i osvoenie kokhidskoi nismennosti, kratkii otscherk. Metsniereba, Tbilisi, p.142.
Kochladze, M. (2002): Pipeline dreams, The World Bank, Oil development and Environmental Protection in Georgia, After the Wall, vol. 23, no. 5. http://multinationalmonitor.org/mm2002/02may/may02corp3.html [06.04.2006].
Krebs, M. & Gaudig, G. (2005): Torfmoos (Sphagnum) als nachwachsender Rohstoff - Untersuchungen zur Maximierung der Produktivität von Sphagnum papillosum im Regendurchströmungsmoor Ispani 2 (Georgien). Telma 35: 171-190.
Lordkipadnidze, O. 2001. The Golden Fleece: myth, euhemeristic explanation and archaeology. Oxford Journal of Archaeology 20: 1-38.
Matchutadze, I. & M. Krebs (2003): News from Georgia - Ispani threatened by road construction, International Mire Conservation Group Newsletter 2003/3: 36.
Rimple, P. (2005): Georgia: Pissing in the Wetlands. www.diacritica.com/sobaka/newswire/2005/07/0718005a.html, visited: 06.04.2006.
Salathé, T. (2005): Ramsar Advisory Missions: No. 54, Georgia, Central Kolkheti Wetlands. www.ramsar.org/ram/ram_rpt_54e.htm [06.04.2006].
Vickers, M. & Kakhidze, A. (2004). Pichvnari 1: Results of excavations conducted by the Joint British-Georgian Expedition 1998-2002. Ashmolean Museum, Oxford and the Batumi Archaeological Museum, Batumi.

Tierra del Fuego Field Symposium multimedia show

Olivier Olgiatti has integrated his pictures and videos of the IMCG Tierra del Fuego Field Symposium 2005 into an impressive multimedia production. The product will soon be made available for download from the IMCG website.
Watch that space: www.imcg.net

IMCG promotional material

IMCG promotional flyer

The IMCG flyer "The future of peatlands is in conservation" is available from the IMCG Secretariat for your IMCG for promotional purposes.
Go to www.imcg.net/docum/flyer.pdf for a preview.

If you wish to obtain copies of the flyer, please contact Hans Joosten (joosten@uni-greifswald.de), indicating:
- how many flyers you would like
- for which concrete promotional activity you intend to use them
- the address to which they have to be sent

IMCG promotional post cards

As many of you have already seen, Michael Trepel has produced a series of beautiful postcards to promote mire conservation worldwide, addressing the following themes:
- Peat is not renewable. Mires in Central Europe are under pressure by an invading peat industry. IMCG advocates the wise and sustainable use of peatlands.
- The virgin mires of Tierra del Fuego are threatened by peat extraction. To promote mire and peatland conservation in South America, IMCG holds a field symposium in Tierra del Fuego (Argentina) in November 2005.
- Mires and peatlands in South Africa hold important fresh water resources. IMCG supports the wise use of tropical peatlands.
- Burning of peatlands in South East Asia boosts carbon emissions, threatens rare species, and causes major health problems. IMCG supports the conservation and wise use of tropical peatlands.
- Permafrost peatlands are threatened by a changing climate. IMCG supports the conservation and wise use of permafrost peatlands.

Follow the link on the IMCG website for a preview.

The postcards are freely available to IMCG members who want to promote mire conservation.
If you wish to obtain postcards, please contact Michael Trepel (michael@ecology.uni-kiel.de) indicating:
- which postcards you want to have
- how many you want to have
- for which concrete purpose you intend to use them
- the address to which they have to be sent

Use them well: stocks are limited!

Ramsar/GAP Brochure "Peatlands. Do you care?"

The Ramsar/GAP brochure: "Peatlands. Do you care?" is freely available from the IMCG Secretariat for promotional purposes. A preview is available at the IMCG Website, please follow the link on the main page.

If you wish to obtain printed copies, please contact Hans Joosten (joosten@uni-greifswald.de), indicating:
- how many copies you want to have
- for which concrete purpose you intend to use them
- the address to which they have to be sent
-

Use them wisely: they are costly and stocks are limited!

Africa flyers

A limited number of copies of the IMCG flyer "Mires and peatlands in South-Africa & Lesotho" (see http://www.imcg.net/docum/mires_sa_05_fly.pdf) produced by Rehana Dada on the occasion of the Ramsar Convention meeting in Uganda (November 2005) are still available for peatland conservation purposes. If you are interested: please contact Piet-Louis Grundling: peatland@mweb.co.za

REGISTER

Please fill out the IMCG membership registration form.

Surf to http://www.imcg.net or contact the secretariat.

Mires and Peat online!
IMCG/IPS Journal

There is still just a little time to submit your new papers for publication in Mires and Peat (the new IMCG/IPS peer-reviewed academic journal) before its official launch, which will give an excellent opportunity to expose your work to a wide audience.

As promised in the last newsletter and during the Tierra del Fuego meeting, Mires and Peat went online on 01 January 2006, when we posted two papers:
- The distribution of peatland in Europe by L. Montanarella, R.J.A. Jones and R. Hiederer;
- Chemical characteristics of some peatlands in southern Poland by M. Malawska, A. Ekonomiuk and B. Wiłkomirski.

In February, we added:
- Increased decomposition of subsurface peat in Swedish raised bogs - are peatlands still net sinks of carbon? by Lars G. Franzén; and
- Causes of degradation and erosion of a blanket mire in the southern Pennines, UK by D.E. Yeloff, J.C. Labadz and C.O. Hunt

The journal will not be launched officially until the joint IMCG/IPS meeting in Helsinki, by which time we hope to add at least a few more papers. Nonetheless, there has already been some highly complimentary feedback. It does seem that we have here the makings of what we set out to establish, namely:
- a high-quality journal
- devoted specifically to mires and peat
- covering all aspects of peatland science, technology and wise use, with
- unlimited free distribution.

Please do take at look at http://www.mires-and-peat.net/ and see if you agree. Although the journal already serves a useful function, we are aiming to achieve a level of content and quality that will warrant classification in the ISI Thomson Master Journal List, so that Mires and Peat will have an 'impact factor'. All comments, and especially (constructive) criticism in this context, will be most welcome.

As always, where we go from here is up to all of you. Please continue to send in your publishable material (see the web site for Instructions to Authors). If there are any more of the papers from the IMCG Tierra del Fuego meeting that can be written up to an appropriate standard, it would be especially good to see these very soon.

Comments (as appropriate) to: Olivia Bragg (Editor): o.m.bragg@dundee.ac.uk or Michael Trepel (Web Administrator): mtrepel@ecology.uni-kiel.de

Ecological Restoration 2006

The deadline for early bird registration and abstract submission of the Greifswald Conference on Ecological Restoration (22- 25 August 2006) has been postponed to 15 April 2006.
Almost 300 abstracts for presentations and posters have been submitted. Restoration of peatlands gets special attention in a session cluster hosted by the International Peat Society and the International Mire Conservation Group with already over 100 contributions. Don't miss the chance to participate in this major restoration event.
For all information see:
http://www.uni-greifswald.de/SER2006

The conference excursions also pay special attention to peatlands. The post-conference excursion (26 – 31 August) to the peatlands of Poland (550 Euro by 20.04.06, 650 Euro after that date) is a week-trip to Poland, that will give you the opportunity to see almost all stages of development, management, degradation and restoration of Central European peatlands with on-the-spot discussions on the limits of human interference in peatlands and on the prospects for their future, especially in the context of wise use and needs of society.
The trip will bring you to the scattered bogs and fens in the hilly landscape of north-west Poland, where well-preserved mires neighbour degraded ones and restoration projects are ongoing. In the Noteć Valley you will see large areas of fens reclaimed for more than 200 years and used for intensive agriculture. What are the measures to minimise the environmental losses in such systems?
The next points of the trip are the pearls of Polish mires: the virgin fens of the Rospuda Valley and the best preserved semi-natural fens of the Biebrza Valley. Here important conservation questions are: why can some areas maintain high species biodiversity without any human interference, whereas other require high-cost vegetation management to prevent succession? How should this management be organised and implemented? What costs should the community pay to preserve such sites? Here we will also discuss hot conflicts between conservation

priorities (species vs. naturalness) and the societal support for infrastructural development.
We continue the excursion passing through the reclaimed Wizna fen – one of the largest land reclamation projects in Poland during communist times. What is the fate of such systems, designed for large-scale collective farming, in contemporary Poland? What are the effects of past drainage on biodiversity and agricultural use? What are the restoration prospects?
We conclude the excursion near Warsaw, the capital of Poland, where peatlands biodiversity suffers not only from past drainage and intensive use but also from the current pressure of the growing city. In Całowanie Fen, we will see the effects of restoration projects and discuss their ecological and economical feasibility.

Rospuda valley

The pre-conference excursion (17.-21. August 2006) New Nature in NE-Germany offers an exciting journey through (restored) nature flavoured with a dash of culture (550 Euro by 20.04.06, 650 Euro after that date). The excursion leads through Mecklenburg-Vorpommern, a very diverse landscape "sculptured" during the last ice-age, with ground and end moraines, sanders, and numerous lakes and valleys.
The diversity of poor and richer soils mixed with fens, bogs and lakes constitutes an exciting landscape with an enormous species-richness. The area is known for its low population density and its numerous large-scale restoration initiatives.
The main focus of the excursions will lay on the large-scaled wetland restoration projects but also other habitats such as woodlands and heaths will be subject of our explorations.
The excursion will lead from a 8,000 ha large abandoned training site of the Russian army where since the early 1990s spontaneous succession takes place, to the Müritz National Park, where in the Serrahn part oligotrophic and mesotrophic mires have been restored in the last two decades.
The next excursion points will be the Galenbecker Lake project, a EULIFE project aimed at stabilizing the hydrology of the lake and at restoring the adjacent fens, and the 'Anklamer Stadtbruch', a 1,500 ha large rewetted coastal flood mire, that before 1995 almost entirely consisted of intensively used degraded grasslands, degraded woodlands, alder and birch brooks and drained bog vegetation. Since a storm-induced flood in 1995, the developments have been dramatic and include the dying-off of 400 ha of woodland. Nowadays natural mire vegetation is re-establishing and bird-life is spectacular.
A main focus will be on the restoration project "Peene valley", a large-scaled nature conservation project of over 20.000 ha in the valley-fen of the river Peene. In the period from 1992 until 2008 over 35 million Euro will be invested in the rewetting and the restorative management (by grazing and cutting) of the valley fen. The Peene valley fen is a very versatile wetland with percolating, flood, and spring mires. Here you will find the whole range of fen habitats from very natural small sedge reeds and calcareous fen-grasslands, degraded and rewetted grassland polders, to drained and rewetted alder brooks.
Subsequently we will visit the 310 ha large polder Randow-Rustow, rewetted in the framework of compensation measures for the newly build motorway A-20.

The rewetted polder Randow-Rustow

Two more EU-LIFE projects are on the programme, the "Trebel valley" (2.500 ha) and the "Recknitz valley" (550 ha), that both dealt with the restoration of the original river beds and with large-scale rewetting of strongly degraded valley fens.
Besides the restoration of the original course of the rivers Trebel and Recknitz, massive measures were taken to stabilize hydrological conditions. On the water divide between both river valleys we find a

raised bog called 'Grenztalmoor' (427 ha). This bog suffered from long years of deep drainage of the surrounding fen-grasslands and was also rewetted in the course of the restoration projects.

River and wetland restoration in the cultural landscape of Northwest Germany and Denmark (25.-29. August 2006, € 450) is the other post-congress excursion.
The landscape in Northwest Germany and Denmark is shaped mainly by agriculture. Thus, river and wetland restoration always has to balance and respect the needs off all involved stakeholders. During this excursion we will show you examples off what is possible in river and wetland restoration. We hope to stimulate discussion (I) which restoration targets are achievable, (II) how the public can be involved in restoration and (III) what we can learn from transboundary co-operation.
The excursion starts with visiting the Ritzeraufarm, which has changed from conventional to organic farming practice. The conversion is monitored by an interdisciplinary research team from Kiel Ecology-Centre that studies the effects of organic farming on animals, plants, crop production, crop diseases, soils and economics.
Next we will study the results of adopt-a-brook-groups ("Bachpatenschaft"). About 1.000 citizens are active as "Bachpaten" in about 80 groups in Wandsbek, informing about nuisances, measuring water chemistry and biota, and actively restoring aquatic habitats. A special project is the restoration of the Wandse Beck to a typical trout brook amidst of the urban setting of the City of Hamburg.
The raised bog Nienwohlder Moor, the next excursion point, was severely affected by hand turf cutting in the first half of the 20th century. From the beginning of the 1980's onwards, the peatland is rewetted by closing deep drainage ditches. The success of these measures is evaluated with a comparison of detailed vegetation mapping carried out in 2005 and 1985.
The Skjern is Denmark's largest river, draining over 10% of the mainland before discharging through the broad shallow Ringkobing Fjord to the North Sea. Less than 40 years ago the lower river catchment supported a rich mosaic of watercourses, lakes, ponds, reed beds, meadows, common grazing land and heath lands. In times of flood, an enormous lake was formed, interrupted only by boggy marshlands.
Between 1962 an 1968, the river was straightened, deepened and embanked, and gradually the wetlands, meadows and heath were turned into a 4,000ha, arable prairie. However, the gains for agriculture were not as easily sustained. As floodwater no longer flowed over land, and as fertiliser was liberally applied, the floodplain began to act as a huge 'source' of nutrients, and was no longer a 'sink' for sediments. This had a disastrous impact on the fjord as it became silted up and polluted. Problems also arose in the drainage area itself. The land shrunk as it dried out, and land levels dropped making drainage ineffective and water turned bright red due to ochre precipitation. In 1987, the Danish parliament decided to restore the River Skjern. In 2002 the restoration works were completed. The effects of the project on the quality of the fjord and the environments of the river and the floodplain are monitored with an exhaustive programme.
The restoration of the transboundary Frøslev-Jardelund Moor project was almost finished more than 15 years ago, but some smaller measures were recently carried out.
Also the "Pasture landscape Eider Valley", south of the provincial capital Kiel, is being monitored extensively after low-intensity grazing was introduced and peatlands were rewetted in 1999. The research focuses both on flora and fauna as well as on nutrient dynamics, hydrology and socio-economical aspects.
The last excursion point discusses the options of river and wetland restoration in relation to the EU water framework directive and the implementation of the Natura 2000 habitat net work.

For more information on the excursions:
www.uni-greifswald.de/SER2006/excursions.html

INTERNATIONAL MIRE
CONSERVATION GROUP

The killing of rodents – Fighting peatland degradation on the Qinghai-Tibetan Plateau (China)

by Martin Schumann

The Sanjiangyuan Nature Reserve, the second largest nature reserve in the world (152,300 km^2) and the highest and most extensive protected wetland area in the world, was established in May 2000 by the State Forestry Administration and the government of Qinghai Province, China. On an average altitude of over 4000 m it is situated in the Sanjiangyuan region (320,000 km^2) in the southwest of the Qinghai-Tibetan Plateau (Plateau Perspectives 2006). Its large expanses of high-altitude peatlands and mountain meadows, known as the "Chinese water tower", are of global significance for biodiversity conservation and carbon storage. As the headwater of the Yangtze, the Huang and the Lancangjiang River the area is of high importance for regulating water storage and supply for large areas of the Chinese lowlands. Five thousand years of traditional nomadic herding (Wiener et al. 2003) have altered the ecosystems on mineral and organic soils and have lead to substantial changes in soil hydraulic conditions in the peatlands that made the area susceptible to degradation. Recent peatland drainage to increase vegetation productivity and carrying capacity and overgrazing have triggered a whole chain of negative processes leading to decreased productivity and immense losses of grazing ground by erosion and desertification (Wu 2000, Schumann & Joosten in press).

First signs of degradation due to overgrazing by yaks and sheep. Photo: Martin Schumann (Hongyuan, 2005)

Some pastures have degraded to the extent that perennial vegetation has disappeared and annual grasses and forbs, which are completely devoured by grazing animals, establish (Ma 1998). The degradation on the Qinghai-Tibetan Plateau (Tab. 1) is one of the most serious environmental and socio-economic issues of the area.

Tab. 1: Areas (in 10,000 ha) and distribution of degraded rangelands on the Qinghai-Tibetan Plateau: (Long & Ma 1997)

Province	Available rangeland	Degraded rangeland	
		1980s	1990s
Tibet	6636.1	1202.6	1990.8
Qinghai	3161.0	910.3	1005.5
Sichuan	1416.0	386.7	467.3
Gansu	1607.2	712.9	787.5
Total	12820.4	3212.4	4251.1

So called "rat infestations" aggravate the scene of destruction after initial degradation. By consuming aerial biomass and roots of plants as well as by covering swards by digging up soil, *Ochotona curzoniae* (Plateau Pika or Black-lipped Pika) as well as *Myospalax fontanierii* (Chinese Zokor or Highland Zokor) (Wiener et al. 2003, Foggin 2000) have worsened degradation of more than 6.4 million hectares of grassland in the Sanjiangyuan region (33 %) and up to 70 % in other regions (CEN 2006).

Rats enhance degradation after drainage and intensive grazing. Photo: Martin Schumann (Ruoergai, 2005)

Traditionally herders install traps and spread poisoned baits to remove rodents from their pastures. Because the rodents have strong migrant and reproduction abilities (during periodic infestations up to 148 animals have been counted per ha, Wiener et al. 2003), these measures are not sufficiently effective. Instead, the poisoning made the rodents resistant to the chemicals and has lead to the death of their natural predators, such as eagles, foxes, and wolfs. An increase of the population of natural predators as well as a reduction of overgrazing would be a sustainable and more effective alternative to cut back rodent populations to harm-free levels.

With its 11th Five-year plan for development China's ruling Communist Party is now focusing on water and energy conservation. It will provide 7.5 billion yuan (925 million US$) to develop better poisons or methods to kill rodents, to reduce overgrazing, and to

relocate farmers and herdsmen from affected areas (CEN 2006).

Further reading:

CEN (2006) China Economic Net, 05.04.2006, http://en.ce.cn/National/Local/200603/03/t20060303_6260730.shtml

Foggin, J. M. (2000) Biodiversity protection and the search for sustainability in Tibetan Plateau grasslands (Qinghai, China). PhD dissertation, Department of Biology, Arizona State University. December 2000.

Long, R. & Ma, Y. S. (1997) Qinghai's yak production systems. In: In Conservation and Management of Yak Genetic Diversity (eds D. J. Miller, S. R. Craig, and G. M. Rana) pp. 105-114. Kathmandu.

Ma, Y. S. (1998) Improvement of yak production on deteriorated "black soil" grassland. Grassland of China 4: 61-63.

Plateau Perspectives 2003-2006, http:/www.plateauperspectives.org/SNNR.htm

Schumann, M. & Joosten, H. 2006 (in press). Towards global exchange of peatland restoration information, with special attention to the Ruoergai Plateau (China). International Journal for Management of Tropical Peatlands.

Wiener, G., Jianlin, H., & Ruijun, L. (2003) The Yak, 2 edn. Food and Agriculture Organization (FAO), Regional Office for Asia and the Pacific, Bangkok.

Wu, N. (2000) Vegetation pattern in Western Sichuan, China and humankinds impact on its dynamics. Marburger Geographische Schriften 135: 188-200.

For more information: martin.schumann@uni-greifswald.de

Ramsar Small Grants Fund

The Ramsar Small Grants Fund was established in 1990 as a mechanism to assist developing countries and those with economies in transition in implementing the Ramsar Convention and to enable the conservation and wise use of wetland resources. It has provided funding and co-funding, up to 40.000 Swiss francs (about US$ 34.000) per project, for about 180 projects, totalling some 7,5 million francs. The Ramsar Secretariat is now **calling for proposals** for the 2006 cycle. The **deadline is 30 June 2006**.
The full announcement can be found here:
http://www.ramsar.org/sgf/key_sgf_call_2006.htm
Guidelines and all of the relevant forms here:
http://www.ramsar.org/sgf/key_sgf_index.htm

Wim Tonnis Peat Award 2006

The Executive Board of IPS has decided to confer the first Wim Tonnis Peat Award to Donal Clarke of IPS and Hans Joosten of IMCG.
The awards, consisting of a framed scroll and a cash price of each € 1,000, are presented in recognition of the commitment to peatlands and peat, efforts in advancing and spreading knowledge about their value, benefits and use, and, in particular, the work on the Wise Use of Mires and Peatlands.
The award ceremony will be held in Hanover on 6 May 2006.

IMCG Newsletter now also available in HTML

Surf to www.imcg.net to read the Newsletter online.

Fast access and better on-screen readability

Regional News

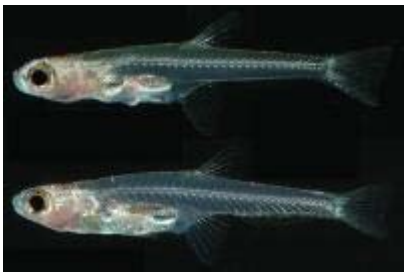
News from Indonesia
World's smallest vertebrate

The smallest known animal with a backbone has been discovered in the peat swamps of Indonesia. It is a fish from the carp family, called *Paedocypris progenetica*. Mature females are only 7,9mm long, which is 0,1 mm shorter than the Indo-Pacific Goby that held the record for smallest vertebrate before the new species was discovered. The largest known individual of *P. progenetica* is 10.3 mm.

The newly discovered species inhabits the highly acidic (pH=3) peat swamps of Sumatra. It is transparent and lives in the dark tea-coloured peat swamp waters. Recent research has shown these waters are home to a highly diverse range of species that occur nowhere else.

The peat swamps have been severely damaged by forest fires and are also threatened by logging, urbanisation and agriculture. Several populations of *P. progenetica* have already been lost.

The fish was first discovered by Maurice Kottelat from Switzerland and Tan Heok Hui from the Raffles Museum of Biodiversity Research in Singapore in 1996, but it was first formally described and named only recently.



Paedocypris progenetica.

Kottelat, M., Britz, R., Heok Hui, T. & Witte, K-E. (2006). Paedocypris, a new genus of Southeast Asian cyprinid fish with a remarkable sexual dimorphism, comprises the world's smallest vertebrate. Proc. R. Soc. London B.

Indonesia must ratify anti-haze treaty

The ASEAN Agreement on Transboundary Haze Pollution (THP) was signed in 2002 and came into force in November 2003. Indonesia signed the agreement in 2002, but it will not be legally binding unless Indonesia ratifies it.

Without Indonesia joining as a party, the treaty will lose its intention to prevent and monitor transboundary haze pollution. As Indonesia is the main source of haze pollution, it seems to be reluctant to ratify the treaty.

According to Indonesian law, an international treaty has to be enacted as a law, which requires a long and tedious process of public hearings and meetings at the House of Representatives. The bill on the ratification of the ASEAN Agreement on THP was initially considered as one out of 78 bills the House would debate in 2006, but the legislative body later decided to drop it.

Environmental issues have never been on the main agenda of Indonesia's national policy and also the problem of transboundary pollution receives little attention from the decision makers. Indonesia is bogged down by other pressing priorities, such as terrorism, the oil price hike and subsidies, and other economic and social problems.

There is, however, a more fundamental problem as to why the bill is not considered urgent. Apart from the bureaucratic process and lack of infrastructure and budget, there is a general opinion among legislators and other important decision makers that the treaty will bring no clear benefits to Indonesia.

Apparently Indonesia fears that the ratification will have implications. Firstly, it is likely that in the longer term, the treaty will include enforcement and liability clauses. This will require Indonesia to apply more stringent law enforcement. Thus far there has been only one case heard in court for those violating Law No. 23/1997 on environmental management. The Indonesian Forum for the Environment (Walhi) and the Riau provincial administration have sued companies suspected of setting forest and land fires between 2003 and 2004, but all cases were dropped without clear reason.

Secondly, the activities of land/forest utilization involve private operators, whereas the treaty mainly deals with state obligations and not those of the private sector. There will likely be resistance from big timber and palm oil industries and logging concessionaires, who have turned out to be the main source of the latest land/forest fires.

Another important stakeholder to the agreement is the local population, who use traditional slash and burn methods to open land for agricultural purposes. Banning such a practice will adversely affect their economy and may lead to more social unrest.

The zero burning policy was adopted by ASEAN in 1999 to restrict – but not necessarily ban completely – the use of fires in land clearing. It is fair enough if the zero burning policy is applied to big oil palm, timber and rubber plantation companies, while farmers, villagers and small holders may be given the concession to allow them to use fire in a controllable manner.

The pressure from other ASEAN member countries, who suffered from the haze in 1997/1998 and recently in August 2005, does not seem to be effective enough to push Indonesia to act rapidly. The government officials dealing with the issue should have a clear understanding that the haze problem is posing a threat, not only to the environment, but also to the economy of the region and the country.

More sound diplomatic persuasion from other ASEAN member countries is also needed. The role of ASEAN, as the governing body of the treaty is by no means unimportant. ASEAN should consider

providing or raising the bulk of the resources for outreach activities. Or, will it need another dry season with fire and haze next year for us to take the necessary measures?

Source: TheJakartaPost.com

Workshop on Vulnerability of Carbon Pools in Tropical Peatlands

The Workshop on Vulnerability of Carbon Pools in Tropical Peatlands was held in Pekanbaru, Riau, Sumatra from 23-26 January 2006. It was attended by 61 participants from 12 countries. It was organised by the Global Carbon Project (GCP), the Global Environment Centre (GEC) and the Centre for International Forestry Research (CIFOR). It reviewed the extent of and carbon store in tropical peatlands, land use change and fire, greenhouse gas (GHG) emissions, future climate scenarios and management options. A field visit to the Kampar Peninsular to assess current peatland plantation management practices was facilitated by APRIL/PT Riau Andalan Pulp and Paper. The workshop was supported by The Asia Pacific Network for Global Change (APN); the joint project of Wetlands International and GEC on Integrated Management of Peatlands for Biodiversity and Climate Change (funded by UNEP-GEF); and the joint Project of Wildlife Habitat Canada, Wetlands International and GEC on Climate Change Forests and Peatlands in Indonesia (funded by CIDA); GCP and CIFOR.

The workshop noted that peat is one of the world's most important carbon stores (storing about 30% of global soil carbon) and tropical peatlands are an extremely important component – storing 30% of peatland carbon. The most extensive tropical peatlands are in SE Asia and cover about 30 million ha of which over 20 million ha are in Indonesia and 4 million ha in Riau province.

Tropical peatlands play an extremely important global role for carbon storage and climate moderation as well as providing a range of other benefits such as biodiversity, water management, and livelihood support to local communities. The fundamental component of peatlands is water. As water level decreases in peatlands so does capacity for sequestering and storing carbon.

Current management practices in peatlands combined with climate change and variability are having a major negative impact on peatlands. In the past 10 years about 3 million ha of peatland in SE Asia have been burnt releasing 3-5 billion tonnes of carbon. In addition, the drainage of peat for oil palm and timber and pulpwood plantations as well as other agriculture and unsustainable logging is estimated to have affected more than 6 million ha and released an additional 2 billion tonnes of carbon over the same period. Thus the emission of carbon dioxide from peatlands in SE Asia represents one of the largest single sources of green house gas emissions globally and is equivalent of 10% of the average global fossil fuel emission over the same period. This is accelerating global climate change.

It is recognized that unsustainable practices in management of peatlands in SE Asia is the main cause of peat fires and associated transboundary smoke haze in SE Asia which causes massive health, social, economic and environmental impacts.

Subsequent El Niño events will increase the likelihood of drought and associated fires will have a major negative impact on peatlands carbon stores and people in the SE Asia region. The next El Niño event is predicted within four years. The predicted changes to climate over the next 50 years as a result of increasing green house gas emissions, including higher temperatures and changes in rainfall patterns combined with land use change and deforestation, will lead to increased degradation of peatlands, increased emissions of greenhouse gases (GHG) and further acceleration of climate change.

The workshop proposed the following target: All stakeholders (including government, non-government, research, private sector and local communities) should urgently work in partnership to prevent peatland fires and degradation. In addition, promote rehabilitation and sustainable use of peatlands in SE Asia to provide multiple benefits to the people in the region and safeguard the global environment.

The workshop recommended relevant stakeholders to:

Regional and global actions

- Expedite the implementation of the ASEAN Peatland Management Strategy and associated National Action Plans. These should be complemented by plans at the provincial and local level in regions with extensive peatlands.
- Strengthen policies and institutional arrangements for peatland management and strictly enforce policies and rules for the management and conservation of peatlands.
- Stop the further conversion and/or drainage of deep peat and peat domes and maintain and restore the hydrology of peatland systems to prevent fires, minimize GHG emissions, and maintain ecological services.
- Improve current forestry, agriculture and plantation management practices to ensure that they contribute to the sustainability of peatlands.
- Promote international cooperative studies to assess the role of peatlands in mitigating climate change and the potential future impacts of climate change and land use on the peatland carbon pool.
- Undertake an assessment of the vulnerability of peatlands to climate change and extreme events. Effectively disseminate the knowledge generated by the scientific community for use by decision makers and to support the assessment processes and later develop adaptation strategies to guide peatland managers, in particular plantation operators.

– Strengthen activities for monitoring changes in the status of tropical peatlands to guide wise management.

Riau Province

– Establish a Riau Peatland Management Partnership to bring together key stakeholders to work together to maintain and rehabilitate peatlands and promote sustainable use.
– Develop through a multi-stakeholder process, a master plan for the future conservation and sustainable development of the Kampar Peninsular given its importance as one of the largest currently relatively intact tropical peatlands in the world.
– Develop integrated management plans for each peatland to maintain the provision of ecosystem functions and services including carbon storage and water supply – as most major peatland ecosystems function as one hydrological unit but are administered by two or more District (Kabupaten) administrations and are managed by a range of agencies.
– Incorporate peatlands as a key part of integrated river basin management since peatlands in Riau form the largest stores of freshwater in the province and play a key role in regulating river flow and preventing saline intrusion and that peatland degradation will jeopardise future water supply.
– Support community-based initiatives for protection and sustainable use of peatlands in Riau as an incentive to maintain peatlands and associated ecosystem services.

Source: http://www.globalcarbonproject.org/

News from Iraq: World Wetlands Day

On 2 February 2006, colleagues in Iraq joined in celebrating World Wetlands Day for the first time. At a meeting organized by the Centre for the Restoration of the Iraqi Marshes of the Ministry of Water Resources, representatives of government agencies, non-government organizations and universities discussed Iraq's programmes focusing on restoration of the Mesopotamian marshes.

Iraq has stated a strong commitment towards the Ramsar Convention goals presented by its delegation at the Ramsar COP9 in Kampala, Uganda, last November. It is expected that Iraq will be able join the Ramsar Convention in a few months.

The World Wetlands Day meeting was well covered by the media including local and international television. Several high profile government officials attended as well as representatives of the Marsh Arabs from the southern marshes. There were several presentations on the status of marsh restoration programmes.

Source: www.ramsar.org

News From Russia: All-russian school "bogs and biosphere"

The Fourth All-Russian School of young scientists "Bogs and Biosphere" under the aegis of the Dokuchaevsky society of soil scientists and with financial support of the Russian Fund of Fundamental Research (05-05-74067) took place in Tomsk from 12-15 September of 2005, organised by Tomsk State Pedagogic University, Tomsk State University, Tomsk Polytechnic University, the Siberian branch of the Russian Academy of Sciences, and the Siberian Scientific Research Institute of Peat.

The aim of the scientific school is to familiarize students, post-graduate students, young lectures and employees of Scientific Research Institutes with the role of peatlands in the biosphere and to point out the need for multi-disciplinary studies of peatland ecosystems.

There were more than 70 persons present from Moscow, Minsk, Tver, Krasnoyarsk, Novosibirsk and especially many young people from Tomsk. It was the first time that representatives from the industry were present.

The fourth school was devoted to the problem of rational nature management on peatlands (modern condition, reconstitution, recultivation and melioration, perspective of use), physical-chemical properties and modern technologies of processing of peatland resources.

There was a one-day excursion to Vasjugan peatland complex (200 km from Tomsk city) where natural and drained sites were visited with different types of bog biogeocoenoses and scientific methods were demonstrated.

All reports are published in "Bogs and biosphere – Materials of the Fourth Scientific School" (300p.).

The Fifth Scientific School will take place in September, 2006 in Tomsk.

For further information: http://www.labtor.tom.ru.

Vasjugan mire (partly) protected!

The first step towards nomination of the Vasjugan mire complex as a Ramsar site has finally been set. On the 10th of March 2006, the Administration of Tomsk Oblast designated an area of 509,045 ha as protected area with "zakaznik" status (IUCN category V). This step is the result of the long-term activity of many people and organizations. The first proposal to develop a specially protected nature area (SPNA) in Vasjugan dates back from the 1950s when Academician Evgeny M. Lavrenko published the long-term plan of SPNA system development in the Soviet Union.

The international community expressed its concern only much later at the end of the 1990s. The unique mire system with a size of 5 million ha and crossing three biogeographical zones had attracted the

attention of foreign scientists and nature conservationists. As a result the suggestion was made to nominate the mire as a World Nature Heritage site and as a Ramsar site.

Photo: Elena Lapshina

There is no clear procedure in the Russian Federation for Ramsar nominations, but one rule is obligatory: the area must have the status of a SPNA. The level can be national or local, the main point is that the area is protected by national legislation, not only by international conventions like Ramsar. This condition was somewhat difficult to meet as the late 1990s and the first years of the 21st century brought rapid developments. Vasjugan had attracted the interests of land users, especially the oil industry.

A number of grants, including a GPI project, supported the activities of a group of experts from the Tomsk administration. Wetlands International Russia Programme supported from different sources, including the GEF/UNEP Peatlands, Biodiversity and Climate Change Project, the development of a wise use approach in Vasjugan.

What has been achieved by the expert group from Tomsk, the protection of 10% of the Vasjugan mire complex, should be continued in the Novosibirsk and Omsk provinces. Only in that way we have the chance to nominate an area that is large enough to do justice to the special character of the world's largest mire.

For more information, surf to:
www.peatlands.ru/?file=news.php&page=358

Tatiana Minayeva based on
information from Natalia Semenova (Tomsk)

New international station in W.-Siberia

On 27.01.06 the government of Khanty-Mansiysk Region has granted 75,2 Mln Rubel (2,2 Mln Euro) for equipping an international 'Center of Environmental Dynamics und Global Climate Change' and an International Field Research Station at Yugra State University (Khanty-Mansiysk).

A beautiful result of longstanding efforts of our Main Board member Elena Lapshina that will lead to an intensification of international peatland research in West-Siberia, one of the most important peatland areas of the world.

News from Ukraine: Danube Delta

Sparked by major development projects in the Danube Delta (such as the oil terminal in Gjurgjurlesti, or the opening of the Bystre mouth of the Danube for deep water navigation, cf. www.ramsar.org/ram/ram_rpt_53e_update.htm), an ad hoc group of international organizations with an interest in the Danube Delta was established during a meeting at UNEP's Regional Office for Europe in September 2004 (including the Ramsar Secretariat, UNESCO, the Danube Commission ICPDR, European Commission, Council of Europe, UNECE Aarhus and Espoo Convention Secretariats, WWF, IUCN, Wetlands International and others).

Ukraine approached this group in early 2005, requesting its support for the organization of an international conference on the wider issues of conservation and sustainable development in the Danube Delta. This triggered a fruitful cooperation of the international group with the Ukrainian, and also the Romanian and Moldovan authorities, in preparation of an international conference, held 27-28 February 2006 in Odesa (Ukraine). Preparatory meetings in Kyiv (March 2005) and Vienna

(December 2005) established the agenda of the international conference and concluded that this should be preceded by three national workshops, held early in 2006 in Tulcea (Romania), Chisinau (Republic of Moldova) and Odesa (Ukraine), to elaborate visions for sustainable development and mechanisms for transboundary cooperation in the Danube Delta.

The international conference was convened by the Government of Ukraine in cooperation with the Governments of Romania and the Republic of Moldova, under the auspices of the Danube Commission (ICPDR), and with financial support of UNESCO and the European Commission. About a hundred specialists, officials from the Foreign Affairs and Environment Ministries of the three countries, international governmental and non-governmental organizations, scientific experts, locally elected people and stakeholders from the Danube Delta region participated in the two-day conference. In plenary sessions and four smaller working groups, they discussed the current state of the Danube Delta and its conservation and sustainable development.

The conference concluded that, as the Danube Delta forms a culturally and geographically unique region, regional development has to be planned and undertaken at an ecosystem scale in a sustainable way, taking into account ecological limitations and sensitivities, based on a common vision and cooperation among the three countries sharing the area: the Republic of Moldova, Romania and Ukraine.

The international conference was a successful event and follow-ups are planned. With this conference, the elaboration of a shared vision for sustainable development and conservation of the Danube Delta has been started.

Tobias Salathé
www.ramsar.org

News from Belarus
Major peatland restoration projects

Two major UNDP-GEF projects related to the restoration of peatlands in Belarus have recently been granted.

The Peatlands Project is a US$3.2 Million medium-sized project (UNDP-GEF, the Belarus Committee of Forestry, the local Belarus bird organisation APB and the Royal Society for the Protection of Birds RSPB) that will be implemented over the next 4-5 years. It aims to restore 17 fen and raised bogs sites covering approximately 42,000ha.

The Government of Belarus has indicated that it would be interested in considering extending this project to cover an estimated 600,000ha of fens and mires across Belarus. This would be the single largest wetland restoration project in the whole of Europe. Such large-scale wetland restoration projects could have important financial consequences as huge amounts of stored CO_2 will be prevented from being released.

The Polesie Project is a US$11 Million project (UNDP-GEF, Ministry of Environment, APB and RSPB) aiming at integrating sustainable land (agricultural, forestry) and water (hydrology of the rivers and water bodies) use into the long-term management of the Pripyat floodplain. The project (entitled "catalyzing sustainability of the wetland protected area system in Belarusian Polesie through increased management efficiency and realigned land use practises") in essence entails the mainstreaming of biodiversity into wetland use management.

The Ministry of Environment of Belarus sees these projects as a direct contribution to its new Strategy for Sustainable Management which focuses on the wise use of natural resources with the intention of introducing direct benefits to local communities via economic activities including commercial enterprises.

For more information contact Zbig.Karpowicz: Zbig.Karpowicz@rspb.org.uk

---

News from Poland/Germany:
Conserving Aquatic Warbler

OTOP-BirdLife Poland together with an international partnership of five NGOs and two national parks (from Poland, Germany, and UK) has submitted a LIFE Nature application to the EU with the title "Conserving *Acrocephalus paludicola* in Poland and Germany". This project application has been successful. The project with a duration of 5 years (until 2010) and an overall budget of € 5.4 Million is one of the largest and most comprehensive species conservation projects ever done in Poland.

Aquatic warbler (*Acrocephalus paludicola*) is the rarest, and the only globally threatened passerine bird (IUCN status "vulnerable"), found in mainland Europe, with a very small world population of only 12-20,500 pairs. Once widespread and numerous on fen mires and wet meadows, this habitat specialist has disappeared from most of its former key range in northern Germany and Poland due to habitat degradation. With its habitats nowadays dependent on human land use (traditional agriculture), and being extremely susceptible to changes in land use, it is now effectively a conservation dependent species. The LIFE "Aquatic warbler" project is focusing on the acutely threatened and genetically distinct population along the German-Polish border ("Pomerania") and the largest Polish population in the Biebrza wetlands.

The project aims to stabilise the population of aquatic warbler in key areas of its range in Poland (8 sites) and Germany (1 site) by simultaneously improving and increasing the habitat. In the 9 project sites, management plans for all potential habitats of the species (42,000ha), will be set up. About 3000ha will be effectively managed, thereby improving c.1500ha of existing aquatic warbler habitat and recreating c.1500ha of new potential habitat in Pomerania and in the Biebrza area. Within the managed area at Biebrza, the population is expected to increase by 15%, with a minimum of 300ha newly occupied by aquatic warbler by the end of the project. In Pomerania, the number of occupied breeding sites will rise from 6 to 7 by this time. Restoration and management practices will be used for best practice guidance for future work in sites in the same area and other areas in the EU and beyond.

For more information contact Przemek Nawrocki: przemeknawrocki2002@yahoo.ca

---

News from Ireland: Is Protection for Bogs Just Lip-Service?

Many important Irish peatland sites are being destroyed although technically they are "protected" under either EU or national legislation. In some cases the damage to the sites has been ongoing for a number of years and yet the relevant authorities seem to be dragging their heels on the issue. The Irish Peatland Conservation Council (IPCC) is currently conducting a "Peatlands under Threat Campaign" in order to tackle the issue and is calling for repair of the damage inflicted on the bogs.

Three sites in particular have been seriously damaged. At Girley Bog Natural Heritage Area (NHA) in County Meath a series of deep drains were inserted into the protected bog affecting an area of 100 acres in December 2005. These drains are seriously affecting the hydrology of the site. Not only did the developers responsible break the law under the Wildlife (Amendment) Act 2000 but they have also breached planning laws. The 100 acres of drainage exceeds the threshold for which planning permission is required (25 acres) and the threshold for which an Environmental Impact Statement is required (74 acres). This selfish disregard for the law and for our natural heritage should not be tolerated by society.

It is imperative, not only that the damage at Girley Bog is reversed, but also that the person responsible is obliged to pay the price for breaking the law – otherwise a message is being sent out that our natural heritage is not valuable enough to fight for. IPCC has highlighted the urgency of this case to both Meath County Council and the National Parks and Wildlife Service – still nothing has occurred to assure IPCC that restoration of the site will occur. The case at Girley is disturbingly similar to a case in Co. Tipperary where extensive drainage of another NHA (Nore Valley Bogs) occurred illegally involving an area of 370 acres. This damage occurred over two years ago and still nothing has been done to either restore the damage or to bring the developer responsible to justice. Will the same thing happen to Girley Bog? Will the same thing happen to more of our so-called "protected" sites? Girley Bog is also a well-known tourist attraction and educational facility in the county. This development will seriously curtail any enjoyment for visitors to the bog in 2006.

Ballynafagh Bog Special Area of Conservation (SAC) in County Kildare has been utilised by a commercial peat developer for the past few years. This is an illegal activity on any SAC.

The IPCC "Peatlands Under Threat Campaign" aims to undertake a full review of the status of every protected peatland in the country and to use this information to build and publish a strategic action plan to help achieve real protection for our peatlands in the years ahead.

News from the EU: Dear President Borrell,

"The European Habitats Forum (EHF) is a group of 14 NGOs working to influence and support the development and implementation of EU biodiversity policy, particularly the Birds and Habitats Directives and Natura 2000 network. The group was established to enable nature conservation organisations to work with the EU institutions in a co-ordinated way and includes the largest and most influential organisations working on these issues, such as WWF, BirdLife International, IUCN and EEB.

We were very pleased to meet with you in November 2004 when we donated a pot of plants to the European Parliament, in cooperation with Dorette Corbey MEP, and appreciated the support you expressed for our work. Our aim of donating the plant pot was that it would be looked after by the Parliamentarians, to represent their responsibility for looking after European nature, especially the Natura 2000 network.

Unfortunately, we are sad to report that the plants did not survive for long and we have since discovered that they were replaced with new plants. Our concern is that this may soon reflect a failure of the EU to live up to its responsibility to look after the Natura 2000 network. We are particularly concerned that the Council agreement on the Financial Perspectives does not include adequate co-financing to establish and manage the Natura 2000 network. The Rural Development budget has decreased dramatically leaving little space for new measures such as payments for Natura 2000 and currently the LIFE+ Regulation reflects less than 0.2% of the EU's budget. This is despite the fact that protecting the environment is an issue of great concern to many EU citizens, for example, the 2005 Eurobarometer shows that nine out of ten Europeans say that decision-

makers should pay as much attention to environmental considerations as to economic and social factors when taking decisions.
We would like to discuss this further with you, in particular, the role of the European Parliament in the ongoing discussions regarding the Financial Perspectives Trialogue. We would be grateful if you would be available to meet briefly with a small delegation of our members for this purpose. I hope that you are agreeable to this proposal and look forward to hearing from you.

Yours sincerely,
Arjan Berkhuysen
Chair of the European Habitats Forum"

Ecolabel

Once more, EPAGMA (the European Peat and Growing Media Association) has addressed the EU Ecolabel board in their relentless lobby to allow for the inclusion of peat in ecolabelled growing media.
The statement is a sad one-sided account filled with half-truths and omissions. The EPAGMA letter follows:
"A majority of the Competent Bodies (in number, not in weighted votes) that replied to the questionnaire regarding the admission of a certain percentage of peat in eco-labelled growing media indicated that they are in favour of the inclusion of peat, and we believe that they have very good reasons to do so. Nevertheless, the Ad Hoc Working Group conclusions recommend that the exclusion of peat be continued and that the eco-label criteria not be revised on this issue.
"EPAGMA expresses its deep regret at this result and would like to emphasize that the exclusion of peat is very likely to lead to a zero response to the European Eco-label by growing rnedia producers throughout the European Union, thus depriving this eco-label of its sense. Peat-free growing media are virtually inexistent on the market, and those that have been placed on the market are negligible in quantity and often disappear from the market due to lack of consumption and bad performance.
"However, the total volume of growing media consumed in the EU (hobby and professional) is estimated to be some 20 million m^3 annually. If the eco-label was taken up as a desirable and viable certification scheme by the industry, this could lead to a major increase in the use and acceptance of the EU flower scheme in a very large market.
"As you surely know, peat has unique characteristics making it indispensable for horticultural use in growing media and the hobby market. In addition, EPAGMA is convinced that the inclusion of peat in the eco-label criteria would support and increase the use of treated biowaste and other processed organic wastes and by-products. Peat is the only product which can dilute the negative characteristics of treated biowaste and related products on a large scale in the long term.
"EPAGMA considers that the current eco-label criteria are not market-oriented, are not based on the most recent and best science and do not ensure good product performance. Therefore they do not encourage manufacturers to apply for the eco-label, do not raise consumer awareness of the use of treated biowaste and related products, and do not encourage buyers to purchase labelled soil improvers and growing media.
"Peat should be more openly accepted and appreciated as the only widely available high-quality material that can act as a vehicle to directly contribute to the stronger use of composted biowaste and other materials in growing media. In the sense of eco-labelling there is probably no better "wise use" of peat than using it in combination with recyclecl materials"

The Royal Society for the Protection of Birds replies:
"The RSPB is disappointed in the one-sided statement from EPAGMA about the exclusion of peat from the Ecolabel for growing media and soil improvers. The RSPB urges for the continued exclusion of peat from the Ecolabel.
In particular the RSPB notes that:
- the EPAGMA statement makes no reference to any environmental issues related to the use of peat, either of habitat destruction or the release of carbon dioxide from an important long-term carbon store
- peat is widely regarded as a short term diluent for green waste, not a long-term one
- peat free products are available, viable and work well for almost all horticultural peat use; and their wider use is being held back by the market influence of the peat producers
- much of the most recent science and research in growing media is directed towards peat substitution and replacement, and not peat continuation
- the UK Government has a target for 90% of the materials for growing media and soil improvers to be of non-peat by 2010 and is making considerable progress towards this

The RSPB is disappointed by EPAGMA''s decision not to encourage its members to apply for the Ecolabel for those products that do meet the criteria; and is confident that the Ecolabel can rise above this tactic and so will continue to promote products with envrionemental benefits to consumers."

See also IMCG Newsletters 2005/1 and 2005/4.

News from Canada: Peat fuel for Ontario?

The Canada province of Ontario is currently looking into using peat for energy purposes. Canada's peatlands cover approximately 130 million hectares and Northern Ontario's vast bogs alone are said to hold the energy equivalent of 72 billion barrels of oil.

Ontario is under pressure to replace its nuclear plants, currently providing almost half the province's electricity, and there are plans to close four coal-fired generating plants due to pollution concerns. In total this will eliminate about 6,500MWe of power.
Peat fuel has only 10% of the sulphur content of coal, virtually no mercury and produces less ash waste and dust emissions. This and the fact that peat is cheaper than oil and gas and can be used in the existing coal-fired power plants, makes the use of peat for energy an interesting option. Most of the power plants could then continue running for decades with regular maintenance.
Peat fuel is roughly 30 per cent cheaper to produce than the 20 million tonnes of coal the province annually uses and much less expensive than natural gas and oil.
Furthermore, a peat fuel industry in northwestern Ontario would bring much needed jobs to a depressed part of the province.
The idea is to cut the peat wet, to lessen environmental impacts. When carried out on smaller parcels of land, wet extraction allows for easier management of water inflow and outflow and minimises negative effects on nearby lakes and drainage systems. Peat would then be mechanically dewatered before thermal upgrading. Wet extraction also allows quicker start-up of restoration, which is obligatory in Ontario.
Besides these economic and practical arguments, the plan is accompanied by the usual nonsense statements.
First there is the "restoration" of cut over peatlands into "productive" wetlands, without giving much of an idea of what "productive" means in terms of benefits (functions) lost and gained.
As project manager Wayne McLellan puts it: "In Quebec and New Brunswick, the Canadian horticultural peat industry is globally recognized for their innovative restoration techniques. In Ireland and Finland harvested bogs have been restored to productive wetlands, or reforested. Here in the northwest, we plan to create productive wetlands. After excavation, a small percentage of the bog will have a predetermined area of standing water where fishing, nesting spots for wildfowl, and wild rice can be provided." He continues, "We have a very sound reclamation plan that is feasible, and we have the scientific back-up to show how it can be done. These bogs can be harvested and restored without damaging the boreal forest ecosystem." This of course hardly addresses the specific benefits of peatlands vs. those of the "restored" wetlands.
Then there is the apparent lie that peat is a renewable energy source. On any viable economic time scale it clearly is not. To mask this sustainability lie, energy peat is referred to as "green", as a "biofuel". This of course opens the door to include peat in all kinds of interesting state subsidised sustainable energy projects.
Resourceful argumentation points out that the carbon released during peat combustion was only recently taken from the atmosphere as opposed to fossil fuel carbon – coal, oil and natural gas – that was removed millions of years ago. Indeed most Canada's peatlands are still actively sequestering carbon. But last year's carbon will be released together with the carbon stored thousands of years ago, which can hardly be called "recent".
Efforts to re-grow peat on a large scale have thus far not been successful. The whole "renewability" argument does not apply to peat. The vast stores of carbon destroyed would need thousands of years to regenerate. It would therefore be much more practical to give up on addressing peat as a biofuel. Using biofuels does not contribute to greenhouse-gas emissions and global warming. Peat combustion does.
A most obnoxious argument used is that in their natural state many peatlands generate methane gas, which is much more detrimental to the environment than CO_2. Extracting peat fuel from peatlands followed by "restoration" or reforestation would eliminate most methane gas emissions and create net carbon sinks. Which is utter nonsense to begin with as the amount of carbon stored in a peatland easily surpasses the amount stored in fishponds or forest. Furthermore, it would be perverse to destroy nature to meet Kyoto targets. Not only because it would go against the idea of mitigating human induced (and not natural) carbon releases, but also because there is still much uncertainty with respect to the processes underlying greenhouse gas emissions as is illustrated by the recent finding that living vegetation also emits considerable amounts of methane.

There may be sensible arguments to locally or regionally use peat as a source of energy. Sadly such sensible arguments are typically accompanied by untruths and misrepresentations.

JC
(source material: www.laurentian.ca/INORD)

News from South Africa: Wetlands, Water and Livelyhoods

The workshop on Wetlands, Water and Livelihoods (30 January – 2 February 2006) brought together a range of experience from 30 countries and included representatives from national and regional governments, non-governmental organizations, aid organizations, and research institutions. It follows the Ramsar Convention on Wetlands Conference of Parties in November 2005, in which over 150 countries committed to take action on wetlands and poverty reduction according to Resolution 14.
Wetlands are among the most productive ecosystems on earth and benefit people by providing income, food security, health and nutrition, water storage and purification, flood and drought mitigation, as well as supporting a range of socio-cultural values. Yet, wetlands are decreasing and degrading more rapidly

than any other ecosystem on earth, plunging millions of vulnerable people into poverty and making the existing poor destitute. Both poverty and wetland degradation are increased by inequitable investments in misdirected economic development schemes. This trend must be reversed. The workshop participants identified viable opportunities for reducing poverty through new approaches to wetland management, while sustaining the resource for future generations.

The participants acknowledged that while conservation and poverty reduction must be seen as complementary objectives, tradeoffs may be necessary. Countries need to take into account the full value of wetlands services for people when making development decisions, and use catchment and transboundary approaches for water management.

The workshop participants identified several key areas for action:

- Strengthen collaboration between conservation and development organizations and between governments, NGOs and the private sector.
- Mainstream the interrelationship between wetlands and livelihoods into international and national policies, plans and strategies. For example, define specific wetland targets and indicators that link Millenium Development Goal MDG 1 on poverty and hunger and MDG 7 on environmental sustainability; implement the environmental action plan of the New Economic Partnership for African Development (NEPAD); and scale up lessons from community-based projects to influence policy and planning processes.
- Empower socially and economically excluded stakeholders to take active roles in and derive benefits from managing wetland resources. For example, define tenure and water rights; use more transparent and community-based resource development and allocation; and recognize the different needs, access to resources and contributions of women, men and youth.
- Develop innovative finance mechanisms. For example, small-scale schemes that support alternative livelihoods as incentives for sustainable wetland management.
- Build capacity for a more integrated approach to wetland and water management and poverty reduction. For example, create opportunities for learning outside of formal structures, with an emphasis on district and local levels; build on and apply local and traditional knowledge.

The Wetlands and Poverty Reduction Project and the Wetlands and Livelihoods Working Group of Wetlands International are taking action on these opportunities in Africa, South-East Asia and Latin America through innovative partnerships. Collaboration with others is welcomed.

For more information: www.wetlands.org

New and recent Journals/Newsletters/Books/Reports

Lavoie, C., A. Saint-Louis & D. Lachance. (2005). Vegetation dynamics on an abandoned vacuum-mined peatland: Five years of monitoring. Wetlands Ecology and Management 13: 621-633.

Several years ago, research was started on regenerartion with common peatland plant species (notably *Sphagnum* moss) of vacuum-mined peatlands. The process was studied over a five-year period in a vacuum-mined peatland in the Rivière-du-Loup area, province of Québec. Surprisingly, not only did the vegetation cover not expand (with the exception of some ericaceous shrubs), but most of the plants actually regressed, like *Sphagnum* moss, trees and cotton grass; even though these species posses great resistance to the harsh conditions in this kind of environment. This again emphasizes that with respect to restoration efforts in (vacuum-mined) peatlands: free reign management is decidedly not an option.

Mazerolle, M., M. Poulin, C. Lavoie, L. Rochefort, A. Desrochers & B. Drolet. (2006). Animal and vegetation patterns in natural and man-made bog pools: implication for restoration. Freshwater Biology, 51: 333-350.

Are man-made bog pools at Bois-des-Bel (BDB) a representative sample of natural bog pools? That's what Mazerolle et al. have investigated based on water chemistry, vegetation structure and composition, as well as amphibian and arthropod diversity. Natural New-Brunswick bog pools served as reference sites. Dominant plant species in the BDB bog pools always differ from natural bog pools: the cover of *Sphagnum*, low shrubs, submerged, emergent and floating vegetation was lower at BDB than in natural bog pools. BDB bog pools showed a higher pH, which may be an explanation for the profusion of amphibians compared to what is commonly observed in natural pools. Only two specialised bog species were found at BDB.

Cleary, J., Roulet, N.T. & Moore, T.R. (2005) Greenhouse Gas Emissions from Canadian Peat Extraction, 1990–2000: A Life-cycle Analysis. Ambio 34: 456-461

This study uses life-cycle analysis to examine the net greenhouse gas (GHG) emissions from the Canadian peat industry for the period 1990–2000. GHG exchange is estimated for land-use change, peat extraction and processing, transport to market, and the in situ decomposition of extracted peat. The estimates, based on an additive GHG accounting model, show that the peat extraction life cycle emitted 0.543106 t of GHG in 1990, increasing to 0.89 3 106 t in 2000 (expressed as CO2 equivalents using a 100-y time horizon). Peat decomposition associated with end use was the largest source of GHGs, comprising 71% of total emissions during this 11-y period. Land use change resulted in a switch of the peatlands from a GHG sink to a source and contributed an additional 15%. Peat transportation was responsible for 10% of total GHG emissions, and extraction and processing contributed 4%. It would take approximately 2000 y to restore the carbon pool to its original size if peatland restoration is successful and the cutover peatland once again becomes a net carbon sink.

PDF download: http://tinyurl.com/gnvv7

IPS Peat Dictionary

The IPS Peat Dictionary of 1984 can now be found online at the IPS website. Currently, the database includes 6,373 peat and peatland related terms in five languages: English, Russian, Finnish, Swedish and German. Updates will be carried out in close cooperation with the IPS Scientific Advisory Board. The Dictionary can also be downloaded. You can find the Peat Dictionary at www.peatsociety.org/index.php?id=93

Printed copies of the Dictionary can be ordered for €35 including mailing costs.

Keppler, F. , Hamilton, J. T. G. , Brass, M. & Röckmann, T. (2006). Methane emissions from terrestrial plants under aerobic conditions. Nature 439, 187–191

Keppler et al. report the remarkable discovery that living terrestrial vegetation emits methane into the atmosphere. The emission occurs under normal physiological conditions, in the presence of oxygen and not through bacterial action in anoxic environments. The estimated emissions are large, constituting 10–30% of the annual total of methane entering Earth's atmosphere.

Keppler et al. showed that methane emission depends on sunlight and temperature, with emissions approximately doubling for each rise of 10 °C. The details of the methane-production are not known, but seems related to the quantity of pectin.

The discovery accounts for observations from space of inexplicably large plumes of methane above tropical forests. Deforestation may now explain the decrease in the global growth rate of atmospheric methane. The global methane emissions from vegetation are estimated to lie between 63 million and 243 million tonnes per year.

Methane is second only to carbon dioxide in enhancing the greenhouse effect. It also affects the way the atmosphere cleans itself of pollutants, and influences ozone depletion through the production of water vapour in the stratosphere. So methane has been the subject of intense scientific and political scrutiny, and is targeted for emissions controls under the Kyoto Protocol on climate change.

The main sources of atmospheric methane previously recognized were microbial activity in wetlands and the eructation of ruminant animals. In the past 250 years, increases in rice culture and livestock farming, led to large rises in methane emissions from both of these sources. It was thought that methane production in flooded rice paddy fields was due to microbial activity in the anoxic environment, but it is likely the rice plants themselves are a significant source of methane.

Source: Nature

Borgmark, A. (2005) The colour of climate: changes in peat decomposition as a proxy for climate change – a study of raised bogs in south-central Sweden. PhD Thesis, Stockholm University.

This thesis focuses on responses in raised bogs to changes in the effective humidity during the Holocene. Analyses on different spatial and temporal scales have been conducted on a number of raised bogs in south-central Sweden in order to gain more knowledge about Holocene climate variability. Peat humification, a proxy for bog surface wetness, has been used to reconstruct palaeoclimate. In addition measurements of carbon and nitrogen on sub-recent peat from two bogs have been performed. The chronologies have been constrained by AMS radiocarbon dates and tephrochronology and by SCPs for the sub-recent peat. A comparison between a peat humification record from Värmland, south-central Sweden, and a dendrochronological record from Jämtland, north-central Sweden, indicates several synchronous changes between drier and wetter climate. This implies that changes in hydrology operate on a regional scale. In a high resolution study of two bogs in Uppland, south-central Sweden, C, N and peat humification have been compared to bog water tables inferred from testate amoebae and with meteorological data covering the last 150 years. The results indicate that peat can be subjected to secondary decomposition, resulting in an apparent lead in peat humification and C/N compared to biological proxies and meteorological data. Several periods of wetter conditions are indicated from the analysis of five peat sequences from three bogs in Värmland. Wetter conditions around especially c. 4500, 3500, 2800 and 1700-1000 cal yr BP can be correlated with several other climate records across the North Atlantic region and Scandinavia, indicating wetter and/or cooler climatic conditions at these

times. Frequency analyses of two bogs indicate periodicities between 200 and 400 years that may be caused by cycles in solar activity.
For a PDF download of a synthesis of this thesis, follow this link: http://tinyurl.com/hb9lz

Shoreline protection and other ecosystem services from mangroves and coral reefs UNEP-WCMC Biodiversity Series No. 24

The tragic and devastating consequences of the Asian tsunami, December 2004, and the hurricanes and cyclones of 2005 were a wake up call for the global community, dramatically drawing attention to the dangers of undermining the services that coastal ecosystems provide to humankind.
This report has gathered lessons that have been learned since these events that will be relevant to future management of the coasts in the context of severe weather events and other potential consequences of global warming. More than ever it is essential to consider the full value of ecosystem services that is the benefits that people derive from ecosystems when making decisions about coastal development.
The publication aims to help decision and policy makers around the world understand the importance of coastal habitats to humans, focusing on the role of coral reefs and mangroves. As well as coastal protection, it also addresses the huge range of other benefits provided by these ecosystems and the role that they can play in coastal development and in restoring livelihoods for those suffering from the effects of extreme events.
For a PDF download surf to:
http://sea.unep-wcmc.org/resources/publications/UNEP_WCMC_bio_series/24.cfm

Also available, a list of projects involving mangroves that have been supported by the Ramsar Convention over the years , through its Wetlands for the Future Fund for the Americas and the Ramsar Small Grants Fund; here:
www.ramsar.org/types_mangroves_projects.pdf

Sengbusch, P. von (2006): Ein multivariates Monitoring-Verfahren zur Bewertung der Gefährdung von Bergkiefern-Mooren im Schwarzwald, Dissertationes Botanicae, Band 400, J. Cramer, Berlin Stuttgart.
(A multivariate monitoring-procedure for the assessment of endangerment of bogpine in the Black Forest. [in german])

Bogpine (*Pinus rotundata* Link) is an endemic species, restricted to central-European mountains like the Black Forest, the Czech Sumava mountains, the Swiss Jura mountains and the foothills of the Bavarian alps. As many bogs were damaged or drained in the past, the area covered by bogpine decreased.

Since 1990, dying of bogpine stands in several bogs in the southern Black Forest could be observed. This dieback is related to hydrological disturbance followed by a change of population dynamics and by the invasion of spruce. The most important question that arose from this analysis was whether more bogs will be affected by the dying in the future.

The investigation showed that spruce has already established itself in more than 50 % of the area formerly covered by bogpine in the Black Forest. By means of multivariate analysis five site types were defined for the upright growth form *var. arborea*, of which one was identified to reflect the sites that will be overgrown by spruce. Only one site type was not affected by drainage, the Pino mugo – Sphagnetum magellanici, which nowadays is rare in the Black Forest.

A dichotomous determination key for the assessment of endangerment of bogpine was developed.
In a detailed appendix (not published), all populations of bogpine were described and restoration was recommended for those bogs where the species is expected to go extinct in the coming ten to twenty years.

IMCG Main Board

UPCOMING EVENTS

See for additional and up-to-date information: http://www.imcg.net/imcgdia.htm

International Conference on Hydrology and Management of Forested Wetlands
8-12 April 2006 New Bern, North Carolina
for more information visit:
http://www.asae.org/meetings/Forest2006/

International Peat Conference: Peat in Solution of Energy, Agriculture and Ecology Problems
29 May - 2 June 2006, Minsk, Belarus
The complete Circular can be downloaded at:
http://peatsociety.org/index.php?id=47.

3rd Workshop and Short Intensive Course on Wetland Water Management
26 June -2 July 2006 Biebrza, Poland
for more information visit:
http://levis.sggw.waw.pl/wethydro/

IMCG Field Symposium and General assembly in Finland
13-26 July 2006, Finland
for more information see elsewhere in this Newsletter.

5th European Conference on Ecological Restoration
22–25 August 2006, Greifswald, Germany
for more information visit:
www.uni-greifswald.de/SER2006
See also IMCG Newsletter 2005/3, 2005/4 and this Newsletter

HydroEco2006
11-14 September 2006, Karlovy Vary (Carlsbad), Czech Republic
International Multidisciplinary Conference on Hydrology and Ecology. For more information visit http://web.natur.cuni.cz/hydroeco2006/

13th International Peat Congress
After Wise Use - The Future of Peatlands
9 - 15 June 2008, Tullamore, Ireland
For more information, surf to www.peatsociety.org

VISIT THE IMCG HOMEPAGE AT

http://www.imcg.net