



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 12 people from various parts of the world that has to take decisions between congresses. Of these 12 an elected 5 constitute the IMCG Executive Committee that handles day-to-day affairs. The Executive Committee consists of a Chair (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

Another Newsletter, very short after the last one, but we still had some material lying around. No additional contributions on starting the new scientific internet-based journal have been received, so we guess that most arguments have been exchanged by now. The Main Board – in all its wisdom – will soon take a decision on the issue.

The new IMCG Executive Committee, responsible for the daily business of our IMCG network, has been elected in the meantime: Jennie Whinam (Tasmania) has been elected chair, Hans Joosten (Germany/Netherlands) secretary, Philippe Julve (France) treasurer, and Tanja Minaeva (Russia) and Piet-Louis Grundling (South Africa) additional EC members. A real international and intercontinental committee!

The end of the year and we are already looking forward to what the next year will bring. Highlights will be the Ramsar Convention in Kampala, a good opportunity to support mire conservation in Africa and – via the Ramsar Coordinating Committee of the Global Action Plan for Peatlands – all peatlands of the World. The second highlight will be our field symposium in Tierra del Fuego (Argentina) where we hope to strengthen mire conservation in Tierra del Fuego, South America, and the southern hemisphere. If you have not done yet, please register, because the limited places will soon be occupied!

All over the world our activities are needed. We enjoy the perspective that the awareness of peatlands is growing in the world. Not because peatlands are much more important than other ecosystems, but because peatlands deserve to be loved just like other ecosystems and to be acknowledged for everything they are.

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 **9 March 2005!**

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

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IMCG Executive Committee

After the Main Board was elected and confirmed in South Africa, the election of the IMCG Executive Committee by the Main Board has taken place.

Jennie Whinam (Tasmania) has been elected chair, Hans Joosten (Germany) secretary, Philippe Julve (France) treasurer, and Tatiana Minaeva (Russia) and

Piet-Louis Grundling (South-Africa) additional EC members for the coming two years.

The Main Board will proceed with cooptation of an additional three members.

Word from the new Chair

by Jennie Whinam

My first participation in northern hemisphere mire symposia and conferences began in 2000 in Quebec at the joint Millenium Wetland Event, when Line Rochefort invited me to present a paper on sustainable *Sphagnum* moss harvesting in the southern hemisphere (and where I was able to finally meet my long-term correspondent and contact with the northern *Sphagnum* world, Prof. Dicky Clymo). This was followed in 2002 by the French IMCG field symposium, when I was co-opted to the Main Board. Until then, most of my peatlands work had involved contact with Tasmanian, mainland Australian and New Zealand mire colleagues. Most of my mire work has concentrated on the ecology and conservation of *Sphagnum* peatlands in Tasmania, on mainland Australia and on sub-Antarctic Macquarie Island, as well as the pool complexes on sub-Antarctic Heard Island. My position in the Nature Conservation Branch (for the past 14 years) is Botanist for the Tasmanian Wilderness World Heritage Area, where I have responsibility for documenting, protecting and promoting flora conservation values, including *Sphagnum* peatlands, buttongrass moorlands and Restionaceous mires.

The recent IMCG symposium in South Africa was the first to be held in the southern hemisphere and indicates a concerted move by IMCG to be truly international, expanding from its traditional European base. It was a great opportunity for non-Europeans to discuss and compare peatland management, restoration and research in their respective countries and with those of the long-established European

research institutes. Of particular interest to me were the similarities between large-scale peat mining restoration projects in Canada (co-ordinated by Line Rochefort), the Working for Wetlands poverty-relief restoration projects in South Africa (presented by Piet-Louis Grundling) and the post-fire *Sphagnum* restoration work that we (Geoff Hope, Roger Good and I) are doing in Kosciuszko and Namadgi (alpine) National Parks after the devastating fires of January 2002. Also of interest were the different ways that Europeans described their peatland types and their interpretation of peat profiles from cores, compared to how we in the southern hemisphere might describe them. The presentation by Rudolfo Iturraspe highlighted the opportunities available in peatland research and the urgent need for conservation management of the pristine mires of Argentina.

I would like to extend my sincere thanks to the previous Chairman, Jan Sliva, for the excellent job he has done in continuing to raise the profile of IMCG and mire conservation, especially through his work in South Africa. It will be a challenge for me to carry out the duties of this position to the same impressive standard as Jan and previous officeholders.

My aim as the new Chairperson of IMCG is to continue to internationalise the support base of the organisation, while maintaining its strong European base and to foster global links that will enable us to better understand, protect and manage these fascinating ecosystems. I thank everyone for their support to date and look forward to an exciting and productive time ahead.



INTERNATIONAL MIRE
CONSERVATION GROUP

The European Water Framework Directive - A chance for mire conservation and peatland restoration?

by Michael Trepel

On 23 October 2000, the “Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy” or short the EU Water Framework Directive (or even shorter the WFD) was finally adopted by the member states of the European Community. The purpose of the directive is formulated in Article 1:

Article 1

The purpose of this Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater which:

- (a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- (b) promotes sustainable water use based on a long-term protection of available water resources;
- (c) aims at enhanced protection and improvement of the aquatic environment, inter alia, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances;
- (d) ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and
- (e) contributes to mitigating the effects of floods and droughts

and thereby contributes to:

- the provision of the sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use,
- a significant reduction in pollution of groundwater,
- the protection of territorial and marine waters, and
- achieving the objectives of relevant international agreements, including those which aim to prevent and eliminate pollution of the marine environment, by Community action under Article 16(3) to cease or phase out discharges, emissions and losses of priority hazardous substances, with the ultimate aim of achieving concentrations in the marine environment near background values for naturally occurring substances and close to zero for man-made synthetic substances.

The directive includes a pathway for its implementation with clearly stated requirements and dates. Until 2003 the governments of the EC member states were requested to transpose the directive in national legislation and to identify river basin districts and responsible authorities (Art. 23, Art. 3). The basic units of the directive – the river basin districts – have to be characterised regarding pressures, impacts and economical analysis until the end of 2004 (Art. 5). In 2006 a monitoring network has to be established and the public has to be informed at latest about the implementation process.

In 2008 draft river basin management plans have to be presented to the public. And in 2009, the finalised river basin management plans should include a programme of measures to achieve the directives objectives (Art. 13, Art 11). It is expected that member states of the EC will meet the environmental objectives in 2015.

The wording of the directive does not use the terms peatland or mire. The term wetland is used twice. In Article 1 wetlands belong to the list of ecosystem types where a further deterioration should be prevented and where their ecological status should be enhanced and when necessary be protected. The term wetland is used in the expression “recreation and restoration of wetlands areas” in Annex VI, part B a non-exclusive list of supplementary measures which Member States within each river basin district may choose to adopt as part of the programme of measures required under Article 11(4).

Also the Horizontal Guidance Document on the role of wetlands for the WFD adopted by the Commission does use the terms peatland and mire rarely (EC 2003). However, this document clarifies how wetland and peatlands can be included in the WFD.

From this we can conclude that, although mires and peatlands are not directly included in the water framework directive, they are clearly indirectly included as wetland systems directly depending on the aquatic ecosystems.

In principal, there are 3 official ways, how peatlands, can be included in the WFD. Large peatlands can be – similar to lakes – identified as a single water body or part of a water body. For lakes, the size limit is 50 ha. Additionally, peatlands can be identified as terrestrial ecosystems depending on groundwater. The most ecological valuable peatlands are of course included as Natura 2000 sites.

In many European countries (Germany, Denmark, Sweden, Poland, to name a few) peatlands are the most widespread inland wetland type. Mires have developed under a variety of hydrogeomorphological and climatic conditions but their development was always directly dependent on the hydrological conditions in their surrounding landscape.

Also at present the hydrological conditions inside and outside a mire or peatland control the functions and uses of the individual systems. Mires and peatlands contribute to the human well-being with several functions (De Groot 1992; Maltby et al. 1994; Joosten & Clarke 2002). Peatlands offer space for agriculture, forestry or peat excavation, where the direct yield creates an income for an individual farmer or company. Peatlands also contribute to the regulation of the global and regional climate, of water quality conditions in rivers and streams, and of their discharge patterning. Additionally these systems offer aesthetic and spiritual inspiration for tourism and

recreation. Planning authorities have to be aware – especially in case of near natural systems – that the highly valued peatland ecosystems are the result of thousands of years of development, whereas economic profit from peatland exploitation associated with deep drainage (agriculture, forestry, peat extraction) is only for the short- or medium term. In many regions, subsidence of the peat surface will become the major water management problem in the coming years.

In the current discussion on the implementation of the water framework directive the peatland issue is underrepresented. This has probably several reasons. (I) Peatlands are not considered by the implementing environmental agency as a wetland type directly depending on aquatic ecosystems due to a lack of data or knowledge. (II) Mire conservationists are not aware of the principles of the new European water policy. (III) Mire conservationists often focus only on ombrotrophic systems. (IV) The status and quality of peatlands in many countries in Europe are unknown. These reasons have some implications for our work in IMCG. We should come up with arguments why all peatland types can be considered as wetlands *sensu* the WFD definition. For this purpose, peatland occurrence has to be linked to the hydrological conditions that underlie these systems. For mires with a direct connection to a river or a lake, the dependency from aquatic ecosystems is evident. Mires without such a connection have developed in close connection to the first aquifer. The water framework directive requests to map and assess the different groundwater bodies and to describe the impacts of groundwater abstraction to groundwater dependent ecosystems. Spring mires, percolation mires, and most terrestrialization and paludification mires are directly fed by groundwater, and can thus be linked to the water framework wetlands definition. Bogs, in common definition, form their own water level by holding rainwater in their peats and vegetation. However, the domed water level in raised bogs is also the water table position of the first aquifer.

The major principle of the water framework directive is to achieve a good ecological status of all water bodies until 2015. The status is assessed by biological and physico-chemical quality parameters. The suggested organism groups all occur in the water body itself, but some of these species depend during their life cycle on different hydrological conditions in the river. They often use neighbouring fields to the river during various life stages. The restoration of a natural flow pattern in rivers is seen as a major prerequisite for healthy river systems (Poff et al. 1997). This implies that the river is allowed to flood the neighbouring fields, conditions which favour the development of peat forming vegetation types. The creation of shallow lakes is an often practised measure to improve nitrogen retention from

agricultural fields. These systems will terrestrialize gradually when they are not managed.

As mire conservationists we should take the whole variety of mire and peatland systems into account as well as the whole variety of strategies to support their conservation and restoration. A twofold strategy can be successful: Conservation should focus on mires with the highest ecological value in a given region. For Europe it is important to strengthen the conservation activities in central and eastern Europe to prevent the destruction of valuable raised bog systems against the invading peat industry and the developing agricultural industry. Valuable mires of central and eastern Europe should be (and are being) included in the European Habitat Network Natura 2000. A listing and description of these sites is automatically required in the river basin management plan.

On the other hand, peatland restoration, especially of riverine peatlands, can be one of the main measures to improve the quality of the surface water bodies and their surrounding in the next years.

For the above it is at least necessary to have an inventory of peatlands in a given region including an assessment of their current status.

For IMCG it is a task to inform about new developments in the European water management and to identify options for peatland restoration and mire conservation. The aim of this contribution is to start the discussion. Your comments are welcome.

Acknowledgements

Olivia Bragg, Elve Lode and Tomasz Okruszko improved this contribution with comments on an earlier version.

Internet Links

Official web site of the European Commission
http://europa.eu.int/comm/environment/water/water-framework/index_en.html

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Michael Trepel trepel@gmx.net

Statement to UNFCCC

by Faizal Parish

In his statement to the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the United Nations Framework Convention on Climate Change (UNFCCC) on 9th December 2004, Faizal Parish addressed the issue of peatlands and climate change. He spoke on behalf of Global Environment Centre, Wetlands International, and Wildlife Habitat Canada, who are working together to implement a global programme on Integrated Management of Peatlands for Biodiversity and Climate Change. This programme is being implemented in conjunction with the governments of Russia, China, Indonesia and other countries in the ASEAN region, and is supported by UNEP-GEF and the governments of Canada and the Netherlands. IMCG supports the project as well.

Most importantly, the statement pointed out again that in 2002, the Conference of Parties of the Ramsar Convention on Wetlands called on all its 130 parties to take urgent steps to maintain or restore peatlands in view of their key role in carbon storage and sequestration. This was further reiterated by the 180 parties to the Convention on Biological Diversity through Decision 7.16 on Biodiversity and Climate Change in February of this year. To date, however, the UNFCCC has not specifically highlighted the importance of peatlands to climate change. The parties to UNFCCC were strongly urged to include reference, within any decision related to adaptation, to the key priority for assessing vulnerability of the peatland ecosystem to climate change and implementing appropriate measures.

International Bog Day 2005

International Bog Day, traditionally the last Sunday in July, has been designed to celebrate the beauty of bogs and to help conserve them. As part of International Bog Day, a range of events will happen such as guided walks, butterfly and bird spots and bog wildlife talks.

The British RSPB is seeking assistance in setting up direct links through the internet between sites in different countries. RSPB will hold an event aimed at families and children at the RSPB Forsinard Nature Reserve in the Flows of North Scotland (15,000 ha of blanket bog also celebrating its 10th anniversary) and would like to contact reserves or visitor centres elsewhere in the World to exchange information and

images beforehand and preferably establish a live webcam link on the day itself.

If it could involve direct contact between children in the different countries, this would be all the better.

For more information, please contact Norrie Russell
Peatlands Reserve Manager
Forsinard, North Scotland
Tel: 01641 571 225
Fax: 01641 571 315
norrie.russell@rspb.org.uk
<http://www.rspb.org.uk>

REGISTER

Please fill out the IMCG membership registration form.

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

Regional News

News from SE Asia: Ministerial meeting on haze

ASEAN Ministers responsible for the environment met at the 11th ASEAN Ministerial Meeting on Haze on 10 November 2004, to review and enhance cooperation in addressing land and forest fires and the resulting transboundary haze pollution.

The Ministers discussed the implementation of the ASEAN Agreement on Transboundary Haze Pollution, following its entry into force on 25 November 2003. The Meeting noted that seven ASEAN Member Countries (Brunei Darussalam, Lao PDR, Malaysia, Myanmar, Singapore, Thailand, and Viet Nam) have ratified the Agreement, and that the three remaining Member Countries (Cambodia, Indonesia, and the Philippines) have taken the necessary steps to ratify the Agreement as soon as possible.

The Ministers noted the possibility of a weak El Nino developing towards the end of the year and in early 2005, and forecast of drier-than-normal conditions in 2005. The Ministers, therefore, agreed on the need to remain vigilant and take necessary preventive and mitigation measures to curb land and forest fires in the region.

The Ministers reviewed the activities of individual ASEAN Member Countries and agreed that Member Countries enhance collaboration in exchanging information and best practices and assist each other in addressing land and forest fires. The Ministers also noted the substantial progress on regional collaborative activities, such as the inventory of fire-fighting resources, the ASEAN Peatland Management Initiative, publication and dissemination of zero burning and controlled burning practices, early warning information systems, standard operating procedures for monitoring, assessment and joint emergency response, which are available on-line for public information on the ASEAN Haze Action Online website: www.haze-online.or.id ..

The Global Environment Centre and Wetlands International made a presentation on the root causes and status of peatland fires in the ASEAN region as well as case studies on community and NGO action to prevent fires and rehabilitate peatlands. The Ministers indicated their strong support for measures to address the peat fire problem in the region and reiterated their support for the development by mid 2005 of the ASEAN Peatland Management Strategy and associated National Action Plans to guide the work of government and other stakeholders over the period 2005-2020 to stop peat fires and ensure sustainable management of peatlands. They also called on the governments of the region to provide more support for actions by local communities and NGOs to address peatland management and fire prevention.

The Twelfth ASEAN Ministerial Meeting on Haze will be held in Indonesia in 2005.

For further information contact: Adelina Kamal, ASEAN Secretariat, lina@aseansec.org

News from Indonesia: Conservation plan for Sarawak park

A site conservation management plan is being drawn up for the Maludam National Park, which is home to the world's only viable population of the red-banded langur (long-tailed monkey).

Various studies were done on the park in the Betong Division under a four-year project that recently ended. The Malaysia-Holland funded Maludam-Ramin project comprised two components.

The first is a detailed study on the park's wildlife, soil, hydrology, and ecotourism. The second is research on the ecophysiology of ramin wood and the sustainable management of peat swamp forests.

Although the forests had been selectively logged, a good number of rare wild animals remained together with a wide diversity of peat swamp flora and fauna. Maludam is the state's second largest national park at 43,147ha. A proposal to extend the park by another 9,125ha has been submitted to the state Cabinet.

As there are Iban, Malay, and Chinese settlements in the park periphery, a more detailed study on the socio-economic well-being of these communities should be carried out. The study may help to find alternative sustainable livelihoods for them to reduce the pressure on the park's resources.

Source: <http://thestar.com.my>

News from Russia: Peat as energy source

On the 18th of November hearings on renewable energy sources were organised in the Lower Chamber of the Russian Parliament (Duma). The initiator was the Chairman of the Russian branch of IPS Alexander Belyakov – vice chair of the Committee for Nature Resources of Duma. His main assistant and ideologist behind the action was Dr. Vladimir Kosov. As expected, peat was considered as one of the main renewable sources of energy. Before the hearings a brochure was distributed in which peat is promoted as a very fast growing matter and an ecologically safe fuel from a climate point of view (cf. Kyoto protocol, although ratified by Russia recently, mechanisms for its implementation are not in place).

Opposition to the approach had been prepared, but unexpectedly both Belyakov and Kosov were invited by President Putin for an unplanned meeting of his party (United Russia). The Russian IPS bosses are

active members of this party and so they were absent in the hearings. It also meant there was chance to present more renewable energy sources to the deputies than just peat.

Thus the great achievements of Russian scientists in wind and solar energy were presented – constructions a hundred times more effective than their western counterparts. All developed in small labs, without financial support, and no promise of money in future either. Instead of support for wind and solar energy, the official decision of the Duma hearings supports the peat industry by fiscal and other financial means. The important environmental role of Russian peatlands was brought forward, but this turned out to be more of public awareness training, than something immediately effective in the political arena.

News from Austria: new peatland Ramsar site

The Ramsar Secretariat announced that Austria, just a few months after having designated a number of valuable mires in the Salzburg region, has appointed, as of 15 October 2004, a small collection of bogs, mires, and fens in the Steiermark region in the southeast as Ramsar sites. The “Moore am Nassköhr” site (211 hectares, 47°43'N 15°33'E), already a Nature Reserve, comprises a number of mires. One bog, the Torfstichmoor, has been used for peat cutting in the 19th century. The other peatlands have been more or less affected by cattle grazing and trampling. In a joint project with the landowners, the Austrian Federal Forests (ÖBf-AG), the Institute of Ecology and Conservation Biology of Vienna University (IECB), and WWF-Austria initiated a management plan financed by the ÖBf-AG in order to improve conditions for the peatlands.

In spring 2002 the ÖBf-AG built dams into all drainage channels and in autumn - after long-lasting negotiations with the farmers - they began building a fence to keep the cattle out from most of the mires. A brief description of the site follows:

Moore am Nassköhr. 15/10/04; Styria; 211 ha; 47°43'N 15°33'E; Nature Reserve. A karst depression of the northern limestone Alps which presents bogs, transitional mires, and fens. The site supports a high biodiversity of the associated mire vegetation; typical species include the Few-flowered Sedge (*Carex pauciflora*), the Sundews *Drosera anglica*, *D. intermedia*, and *D. rotundifolia*, Bogbean, Bog Swertia, and numerous moss species. The wetland has an important role in groundwater recharge and water retention, especially after heavy rainfall. 19th century peat extraction, long discontinued, still negatively affects the hydrology through lowered water tables and erosion. Trampling by cattle has caused disturbance of the vegetation cover. Meanwhile, peat extraction and drainage are prohibited in the mires and a fence to prevent grazing has been set up. Outside the mires, sustainable forest

management, hunting and pasturing are continuing. Ramsar site no. 1404.

Source: www.ramsar.org

News from Scotland: Windmills on Lewis

The North Lewis peatlands, one of the largest blanket bog areas in Europe, is under threat of destruction. There are plans to build the largest windfarm in the world on this Special Protection Area and Ramsar Site.

The proposal by Amec and British Energy is for a 234 turbine, 702MW wind farm on the Isle of Lewis in the Western Isles of Scotland. The turbines will be 140m high to the tip of the blade and be supported by a large concrete foundation. The application also includes 167km of roads, nine electrical substations, a control building, 9 wind monitoring masts, 210 pylons supporting a network of overhead lines, 5 rock quarries, 8 temporary compounds, and 4 concrete batching plants. All this will take roughly three years to build. The total area of land taken up by the development will be over 750 hectares.

The developers are AMEC, a multinational construction company, and British Energy, Britain's largest nuclear energy supplier. Over 88% of local residents are opposed to the proposal. The area depends heavily on tourism, and over 90% of tourists visiting the area are opposed to the plans. The area is the heartland of a minority language, and has a rich cultural heritage associated with the moorland, which would be destroyed.

The Lewis Peatlands Special Protection Area (SPA) was classified under the European Council Directive on the Conservation of Wild Birds (79/409/EEC); the site encompasses an area of 58,984.23 hectares. Of all the British SPAs, this has the largest population of golden plover at the highest densities; it also has the largest population of dunlin. It is also almost certainly the 'best' site in Europe in terms of golden plover and dunlin.

The Environmental Statement (ES) produced by the developer states that the 50 golden eagles and 16 red-throated divers are at risk of colliding with the development throughout its 25-year lifetime. The ES also concludes that 352 golden plover territories and 314 dunlin territories could be displaced during the operation of the wind farm, hundreds more will be affected during construction. Merlin, greenshank, whooper swans, greylag geese, and corncrakes may also be affected by displacement, disturbance or collision.

The ES concludes that 577hectares of SPA habitat will be lost or disturbed including 152ha of active blanket bog, a priority habitat under the EC Habitats Directive. The construction on the peatland will lead to a release of stored carbon. Recent data suggests that wind farms developed on peat have a 1-3 year payback time in terms of carbon loss (assuming wind

farms are displacing electricity generation using fossil fuels). If the development were to result in the complete degradation of the peatland then this carbon payback period could be between 20-30 years.

IMCG has written a letter of protest to the developers, referring to commitments to the Ramsar Convention, to the Ramsar Global Action Plan for

Peatlands stressing the need to protect more peatland worldwide, to the EU Habitats & Species Directives obliging to protect blanket mire, and to the Scottish Biodiversity Strategy to keep special sites special.

For more information, visit www.mwtlewis.org.uk, or the developers website at www.lewiswind.com

“Then the electric power arrived with all its amenities: no more looking for matches, or blowing at a dying peat ember when you arrived home after a day on the moor, at the peats or the croft, trying to ignite a paper in order to light the lamp, no more nasty smell of paraffin or toasting of oat bannocks by the fire, and no more cursing of wireless sets when the battery conked out in the middle of the Gaelic programme. All wireless sets in the isles were battery sets.

...

“There is no doubt that electric power revolutionised life in the isles. It dealt with blow to many of bad customs and unfortunately to many good ones. The ceilidh house as we knew has gone. Modern progress and real ceilidhs do not go together. You have to knock at most doors now and wait for an invitation to come in. There are carpets on the floor and cushion on the chairs, and you cannot smoke volumes of thick, black tobacco and spit accurately from a distance into a fire. The ceilidh now is in a hall, and that in a way is a good thing, but there will be no peat reek, no sooty caber, no drink of pure spring water from the tinker’s jug, no steady thump of the flail behind the tallan and no mellow lowing of cattle at milking time. These conditions were essential for a real ceilidh.

A new era has crept in. It brought with it many improvements, but it has swept away many things which the older generations cherished and held dear, something that money cannot buy – the traditional ceud mile failte of a kind and hospitable people. Civilisation, so called, had reached the isles and commercialism and distrust along with it.”

Kenneth MacDonald (2003). Peat fire memories. Life in Lewis in the early twentieth century. Tuckwell Press, East Linton.”

Sphagnum thieves

Criminal organisations are turning to the countryside to make money with devastating effects on Scotland’s native habitats.

Police officers working with Scottish Natural Heritage (SNH) have found that work parties, often involving illegal immigrants and asylum seekers, are put to work by criminal drug gangs to pick sphagnum moss, which is then sold to garden centres.

Large tracts of endangered peatlands are being irreparably damaged for the black market trade in moss used in Christmas wreaths and for hanging baskets.

The new Nature Conservation (Scotland) Act, which came into effect last month, will make it an offence for anyone to damage protected sites. It is illegal to take plants or other natural resources without the permission of the landowner.

Scottish Natural Heritage is working with Strathclyde Police as part of the Partnership for Action Against Wildlife Crime initiative, to urge gardeners to find out where the moss was sourced or if garden retailers supply wreaths made from non-moss products.

This year there have been two known cases of large-scale illegal gathering of sphagnum moss in Lanarkshire, one of which caused £34,000 damage.

Source: The Scotsman

News from the EU An eco-label for peat: new rounds – new chances?

In IMCG Newsletter 2001/1 we reported on the European Union revising the criteria for ecolabeling of soil improvers and, for the first time, growing media. Initial ideas included the proposal to give an ecolabel to growing media that – next to 30% of ecolabeled soil improver – could contain up to 70% of peat. IMCG successfully intervened with an extensive position paper (see Newsletter 2001/1 or www.imcg.net/docum/ecolabel.htm) leading to the EU decision (2001/688/EC) NOT to allow peat in any ecolabelled growing media and soil improvers. The relevant decision text stated:

- “A product shall only be considered for the award of an eco-label if its organic matter content is derived from the processing and/or re-use of waste materials.”
- “Products shall not contain peat or any products derived from peat.”

These revised criteria were decided to be valid from 28 August 2001 until 27 August 2006.

The Stichting Milieukeur (the Dutch Competent Body for the European Eco-label) has now been commissioned to revise the criteria again. This Stichting Milieukeur again asked SV&A sustainability consultants in Leiden (the Netherlands) to perform the necessary research activities and process support. SV&A has now recently formed an

Ad Hoc Working Group to give their input and views.

The revision process will focus on:

- market and environmental information concerning growing media (certification of) functional quality
- the possible use of sewage sludge
- criteria compatibility with national legislation e.g. heavy metals
- a reassessment of the possible use of peat
- packaging
- a reassessment of nutrient loadings.

Again we see that peat is being considered for eco-labelling.

Most of the objections that IMCG had raised in 2001 still exist. On the other hand the political field has slightly changed: we now increasingly encounter the incorrect claim of the peat extraction lobby that peat is a sustainable and renewable resource and we see governments for political reasons or for lack of common sense honouring that claim (see a.o. "Renewability revisited" in IMCG Newsletter 2004/1).

IMCG (Hans Joosten) has been asked to participate in the Ad Hoc Working Group. We are eager to see whether the International Peat Society will again only represent a peat extraction lobby (see Newsletter 2004/3) or that it will succeed in applying the IPS-ratified principles of Wise Use...

News from USA

Arctic National Wildlife Refuge safe for now

The Bush administration has withdrawn a proposal to drill for oil in Alaska's Arctic National Wildlife Refuge (ANWR) from its omnibus energy bill.

Even when the ANWR drilling is off the table for now, there is still concern about other aspects of the energy bill, including provisions for significantly increasing oil and natural gas drilling on otherwise pristine federal lands, boosting coal production, which will increase emissions of greenhouse gases and loosening environmental regulations on the power industry.

Meanwhile, Alaska's Congressional delegation is still trying to open up ANWR to drilling. Newly elected Republican Alaska Senator Lisa Murkowski said at a press conference last week that pushing for an ANWR bill would be her first order of business when Congress convenes next year. Murkowski staffers reported that tacking ANWR drilling onto a budget bill - where it would only need 50 votes to pass - seems a likely scenario in light of the proposal's exclusion from the energy bill.

Source: <http://www.emagazine.com>

News from Canada:

IPS conducting study on impact of peat use

Commission II of the International Peat Society has organized a study that will gather information on the total impact peat has in horticulture. It takes into account the overall sales of peat, the products grown in peat and the number of people employed in those industries dependent on peat.

The results of the survey will be used to promote the peat excavation industry and to defend it by showing its overall economic impact.

University of Waterloo to set up new hydrology lab

According to Dr. Jonathon Price, the University of Waterloo has allocated space for a new laboratory that, when completed, will be the best peatland hydrology lab in the country. Dr. Price is a research director with the Peat Ecology Research Group (PERG) and is active with the Industrial Research Chair on Peatland Management. He has been working with Dr. Line Rochefort and other colleagues for several years and is the leader of their hydrology research.

Source: Canadian Sphagnum Peat Moss Association

News from IPS:

Scientific Advisory Board Founded

At their meeting in Amsterdam on 1 November 2004, the Chairs of the eight IPS Commissions agreed with the proposal of the Executive Board to establish a "Scientific Advisory Board" (SAB). The new organ is formed by the Commission Chairs and chaired by the 2nd Vice President of IPS to ensure active communication with the Executive Board. It is planned to arrange meetings of SAB twice annually in connection with other IPS meetings. The travelling costs of the Chairs are subsidized by IPS funds. In Amsterdam, the group had a fruitful first meeting and the work of the Commissions will intensify more in the future. The next meeting of the SAB will be held in connection with the IPS Annual Assembly in Poland on 10 May 2005.

Reprint of Peat Dictionary

Due to the continuing demand for the Russian-English-German-Finnish Peat Dictionary originally published in 1984, the IPS Secretary will arrange a re-print of the book. The new peat dictionary is expected to be available in spring 2005, and will be sold for EUR 30 plus mailing costs. There is an option to include French in the dictionary, initiated by the French National Committee of the IPS, as well as the possibility to transform the contents of the book into a CD or web version later on.

Source: IPS

New and recent Journals/Newsletters/Books/Reports

Van Duinen, G.-J., Bobbink, R., Van Dam, C., Esselink, H., Hendriks, R., Klein, M., Kooijman, A., Roelofs, J. & Siebel, H. 2004. Duurzaam natuurherstel voor behoud van biodiversiteit. Expertisecentrum LNV, Ede, 240 p (in Dutch)

Overview of the important results of the Dutch "Nature Survival" programme dealing with the successes and failures of restoration of nature conservation values in the Netherlands in the past 15 years. In the 1980s natural diversity was severely threatened in the Netherlands, one of the most densely populated areas of the world. This has led to an ambitious governmental programme of nature restoration since 1989. In contrast to many other countries, where interventions are based on intuition and actionism, practical restoration and mitigation measures were combined with in-depth scientific research to an extent that is unique in the world.

The approach included a comparison of the major parameters of disturbed/damaged and pristine ecosystems followed by process oriented laboratory research. The insights from that research successfully applied in the field.

Almost half of the book is dedicated to the experiences in mires, both bogs – especially the problems associated with nitrogen deposition and the positive effect for Sphagnum re-establishment of CO₂ availability from peat mineralization – and fens – with much attention to hydrochemistry and sediment chemistry. Special attention is paid to the fauna, a neglected field in restoration research. Animals require other restoration conditions than plants and vegetation. For more information: Gert-Jan van Duinen: duinen@sci.kun.nl

Lucassen, E.C.H.E.T. (2004) Biogeochemical constraints for restoration of sulphate-rich fens. PhD Thesis, University of Nijmegen, 150 p

From the summary:

In this thesis, biochemical processes occurring in sulphate-rich groundwater fed fens are studied under two hydrological conditions: semi-natural conditions with a continuous input of base-rich and iron-rich groundwater, and conditions in which groundwater input is strongly decreased as a consequence of damming surface water. The aim of this study was to find out which factors and processes are responsible for the observed change in vegetation (from plants characteristic of mesotrophic to highly eutrophic conditions) and to determine biogeochemical constraints for the restoration of desiccated sulphate-rich fens.

Under semi-natural conditions, the continuous input of groundwater supplies fens with bivalent cations (iron, calcium and magnesium) and electron acceptors for the microbial breakdown of organic matter (iron, nitrate, sulphate). High inputs of bivalent cations via the groundwater lead to

saturation of the sediment adsorption complex in seepage zones, preventing the binding of NH₄⁺ which is then continuously removed via the flowing groundwater. So a high input of bivalent cations via the groundwater results in restricted ammonium availability in fens. The continuous input of iron(hydr)oxides also increases the capacity of the aerobic sediment top layer to bind phosphate resulting in a decreased mobilisation of phosphate from the sediment to the water layer. Next to this, reduced iron is capable of binding sulphide in the sediment restricting mobilisation of phosphate in the sediment due to the interaction of sulphide with iron-phosphate complexes. Under semi-natural conditions the formation of iron-sulphides is restricted as sulphate reduction is inhibited in the presence of high iron and nitrate concentrations which are energetically more favourable electron acceptors. Immobile iron-sulphides are oxidised as a consequence of periodic drought during summer, regenerating immobile iron(hydr)oxides capable of binding phosphate, while mobile sulphate is removed via the flowing water layer when groundwater input increases. Oxidation of iron-sulphides also leads to the production of acid. The sensitivity of sediments to drought, acidification, and mobilisation of heavy metals depends upon the amount of iron-sulphides and the buffering capacity of the sediment. In contrast to seepage zones that never dry out, periodic drought of parts outside seepage zones mostly will not lead to strong acidification as no accumulation of iron-sulphides takes place. Periodic drought also leads to oxidation of ammonium and formation of nitrate which diffuses to deeper anaerobic sediment layers where it is denitrified resulting in the production of nitrogen gas that disappears into the atmosphere (a process called coupled nitrification-denitrification). Under these mesotrophic conditions, fens are dominated by a species-rich Calthion-vegetation characterised by species like marsh marigold (*Caltha palustris*), swamp horsetail (*Equisetum fluviatile*), greater spearwort (*Ranunculus flammula*) and many *Carrex*-species including elongated sedge (*Carex elongata*) and cyperus sedge (*Carex pseudocyperus*).

Increasing water levels in desiccated fens by damming surface water leads to a decreased groundwater input and thus to a restricted supply of base cations and the electron acceptors (iron and nitrate). The lower input of bivalent cations leads to increased binding of ammonium to the sediment adsorption complex resulting in a higher ammonium availability in the pore water. Reduction of sulphate is no longer inhibited as iron and nitrate are depleted. Produced sulphide will reduce iron from iron-phosphate complexes resulting in phosphate mobilisation. By maintaining permanent high water tables, no periodic drought occurs during summer. As a consequence, iron-sulphides are not oxidised and the concentration of iron capable of binding

phosphate remains low. Thus in stagnating surface water, nutrient availability in the sediment is high and accumulation of nutrients to the stagnating water layer takes place. The increased sulphide concentrations in the sediment are toxic to Calthion-vegetation. Black alder (*Alnus glutinosa*) dies, falls down, and light intensity increases. The increased light intensity, in conjunction with the increased nutrient availability, leads to massive growth of *Lemna minor* and fast growing wetland grasses. *Glyceria fluitans* and *Glyceria maxima* are capable of detoxifying sulphide outside the plant as they have high radial oxygen losses at the roots. *Lemna minor* can completely cover the water surface when phosphate concentrations in the water layer are high. As a consequence, less oxygen diffuses to the water layer and the water layer can become anaerobic which further stimulates the mobilisation of phosphate from the sediment to the water layer.

For a successful restoration of desiccated fens, they have to be gradually rewetted, with regular desiccation periods included, in order to allow a Fe pool to build up in the desiccated sediments. The adverse effects of SO_4^{2-} accelerate with rising water tables. Building up an Fe pool makes the previously desiccated parts of fens less sensitive to SO_4^{2-} reduction in periods when groundwater inputs are relatively high. In addition, stagnation of surface water should be avoided. Water tables can be raised without causing stagnation of surface water by raising them to below the potential groundwater table. This maintains a positive groundwater pressure, which enables continuous flow-through of groundwater, supplying base cations and electron acceptors to the system. Finally, periodic drought during summer is important in oxidising reduced Fe compounds in the sediment and thus in re-increasing the content of Fe(III) capable of binding o-PO_4^{3-} . Periodic drought can be achieved by making use of a controllable dam.

For more information: Esther Lucassen:
estheluc@sci.kun.nl

Gorissen, I. (2004) Dwarf shrub heaths of Europe – from Atlantic to Caucasus and Ural. Verlag Ingmar Gorissen, 182p (in German and English)

This lushly illustrated book discusses European dwarf shrub heaths on oligotrophic-acid soils in all their floristic diversity. The book addresses questions of how to characterise the European habitats in a global context, addresses the diversity and variations of European dwarf shrub heaths, and identifies heath-regions and centres of heath-biodiversity.

Above all it is a catalogue of the 68 heath-regions that were identified, beautifully and richly illustrated with colour photographs of plants and landscapes.

For a table of contents and some sample pages, surf to:

<http://www.marz-kreations.com/WildPlants/Promo.html>
Available from Ingmar Gorissen,
gorissen@team4-landschaftsplanung.de

Brugués, M., Muñoz, J., Ruiz, E. & Heras, P. (2004) Flora Briofítica Iberica: Sphagnaceae: Sphagnum. Spanish Society of Bryology (SEB: Sociedad Española de Briología), Murcia, 79 p

When thinking about Mediterranean landscapes, olive groves, cork oak forests, and vineyards might come in mind first...

Although the Iberian Peninsula is poor in extensive peatlands, you can find lots of European mire species, vascular plants as well as mosses, in different kinds of microhabitats.

As an important jigsaw piece for the investigation and understanding of wetlands on the Iberian Peninsula, the Spanish Society of Bryology (Sociedad Española de Briología, SEB) recently published the new volume of the series Flora of Iberian Bryophytes (Flora Briofítica Iberica) devoted to the genus *Sphagnum* (Sphagnaceae).

The authors give a short introduction to the Genus, mentioning the most important morphological features. They also present two keys to all 29 species in 7 sections of *Sphagnum* found on the Iberian Peninsula. While the first key works on the basis of microscopical characteristics, the second one is based on macroscopical features and therefore enables identification in the field.

This is followed by a detailed description of each species, containing the current correct name, its synonyms in former publications, morphological features, habitat types and ecology, geographic range, type material, and the most important distinguishing features to similar species.

The volume impresses by its excellent drawings and a short but clear glossary.

Unfortunately there are no geographic range maps, which would have been very helpful for people who cannot handle all the names of Spanish and Portuguese Provinces and their abbreviations. A clearly arranged reference list at the end would have been helpful, too.

The volume is written in Spanish, therefore people who do not speak Spanish or just a little might have some problems working with it. For more information: contact Patxi Heras & Marta Infante: bazzania@arrakis.es

Martin Baumann

Lapshina, E.D. (2003) Flora of South-East West Siberian mires. Tomsk University Press, Tomsk, 294 p. (in Russian).

A result of more than 20 years of intensive study of the flora and vegetation of West Siberian mires by our Main Board member Elena Lapshina (Professor at Tomsk University and Ugra State University, Khanty-Mansyisk). The book is divided into five chapters: The natural conditions of the West Siberian plain; floristic methods and a short overview on the vegetation of South-East West Siberian mires; vascular plants and mosses of the South-East West Siberian mires; analysis of their flora; conservation.

The most outstanding contribution of this book to the international community of mire scientists is the inventory and detailed description of 344 vascular plant species and 242 moss species occurring on South-East West Siberian mires. The annex provides information on the occurrence on mires, areal distribution, and ecology (water conditions, trophic state, plant communities) of all these species. In addition, their frequency in different mires landscapes (e.g. forested valley mires, groundwater-fed forested mires, calcareous brownmoss fens, meso-oligotrophic pine-Sphagnum mires, open ombrotrophic Sphagnum mires, forested ombrotrophic Sphagnum mires) is described. For further information and book orders, please contact Elena Lapshina: edlapshina@hotmail.com (FT)

Franziska Tanneberger

Composting and peat-free gardening. English nature, 2004. 11 p.

Peat is still abundantly used in gardening, but the peat resource is declining and its extraction causes major damage to natural habitats. This brochure presents alternatives, with special attention being paid to composts.

It can be downloaded from:

<http://www.english-nature.org/pubs/publication/PDF/CompPeatFree.pdf>

Or surf to www.imcg.net and look under peat alternatives.

Tourbières-INFOS n°10 – Novembre 2004

Tourbières-infos is a publication of the French spider in the peatland web Pôle-relais Tourbières. Their 10th Newsletter has been released recently, surf to: <http://www.pole-tourbieres.org> and have a look (in French).

Paulissen, M. 2004. Effects of nitrogen enrichment on bryophytes in fens. PhD thesis Utrecht, 134 p.

Thesis consisting of 4 papers, an introduction, and a general conclusions dealing with the role of increased nitrogen availability on the decrease of characteristic brownmosses from dutch alkaline fens, i.c. *Scorpidium scorpioides*, *Campylium stellatum*, and *Fissidens adianthoides*, and the increase of acidiphytic moss species like *Sphagnum fallax*, *S. palustre*, *S. squarrosum*, and *Polytrichum commune*. Greenhouse experiments showed that brownmosses are more sensitive to ammonium fertilization than *Sphagnum* or *Polytrichum* species because the former are less able to detoxify ammonium. In the Netherlands 10 – 123 more ammonium is available in the moss layer than in a cleaner area in Ireland. This points at the necessity to decrease ammonium emission from intensive husbandry in the Netherlands. For more information: Maurice Paulissen: mp1973@xs4all.nl

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IMCG Main Board

Chair:

Jennie Whinam (Australia)
Nature Conservation Branch
Dept of Primary Industries, Water & Environment
GPO Box 44; Hobart TAS 7001
Tel.: +61 3 62 336160 / Fax: +61 3 62 333477
<http://www.parks.tas.gov.au/index.html>
jennie.whinam@dpiwe.tas.gov.au

Secretary General

Hans Joosten (Germany, Netherlands)
Botanical Institute,
Grimmerstr. 88,
D-17487 Greifswald, Germany;
Tel.: + 49 (0)3834 864128/ Fax: 864114
joosten@uni-greifswald.de
<http://www.uni-greifswald.de/~palaeo/>

Treasurer

Philippe Julve (France)
HERMINE Recherches sur les Milieux Naturels
159 rue Sadi Carnot,
59280 Armentières, France.
Tel. + fax : + 33 (0)3 20 35 86 97
philippe.julve@wanadoo.fr
<http://perso.wanadoo.fr/philippe.julve/>

additional Executive Committee members

Tatiana Minaeva (Russia)
Wetlands International Russia Programme,
Nikoloyamskaya Ulitsa, 19, strn.3,
Moscow 109240 Russia;
Tel.: + 7 095 7270939 / Fax: + 7 095 7270938
tminaeva@wwf.ru
<http://www.peatlands.ru/>

Piet-Louis Grundling (South-Africa)
IMCG Africa, Ihlaphosi Enviro Services cc,
P.O. Box 912924, Silverton 0127, South Africa;
Tel/Fax: + 27 12808 5342
peatland@mweb.co.za

other Main Board members:

Olivia Bragg (UK)
Geography Department, The University,
Dundee DD1 4HN, UK;
Tel: +44 (0)1382 345116 / Fax: +44 (0)1382 344434
o.m.bragg@dundee.ac.uk

Stuart Brooks (Scotland)

Scottish Wildlife Trust, Cramond House, Kirk
Cramond, Cramond Glebe Road,
Edinburgh, EH4 6NS United Kingdom;
Tel: +44 (0)131 312 4743 / Fax: 312 8705
sbrooks@swt.org.uk
<http://www.swt.org.uk/>

Rodolfo Iturraspe (Tierra del Fuego, Argentina)

Alem 634, (9410) Ushuaia, Tierra del Fuego,
Argentina;
rodolfoiturraspe@yahoo.com
iturraspe@tdfuego.com
<http://www.geocities.com/riturraspe>

Elena Lapshina (West-Siberia)

Ugra State University
Department of Environmental Dynamics and Global
Climate Change
Chehov str. 16, Khanty-Mansyisk
628012, Russia
Tel./Fax.: +7 34671 57655
e_lapshina@ugrasu.ru

Jan Sliva (Germany, Czech Republic)

Technische Universitaet Muenchen, Department of
Ecology, Chair of Vegetation Ecology;
Am Hochanger 6,
D-85350 Freising-Weihestephan, Germany;
Tel.: + 49(0)8161 713715 / Fax: 714143
sliva@wzw.tum.de
<http://www.weihestephan.de/vegoek/index.html>

Leslaw Wolejko (Poland)

Botany Dept., Akad. Rolnicza,
ul. Slowackiego 17, 71-434 Szczecin, Poland;
Tel.: +48 91 4250252
botanika@agro.ar.szczecin.pl or ales@asternet.pl

Meng Xianmin (China)

Mire research institute,
College of City and Environmental Sciences
Northeast Normal University
No. 138, Renmind Street, Changchun 130021
The People's Republic of China
Tel/Fax: 0086 431 5268072
mengxm371@nenu.edu.cn / mxm7949172@mail.jl.cn

UPCOMING EVENTS

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

Asian Wetland Symposium

6-9 February 2005, Bhubaneswar, Orissa, India.

for more information surf to:

<http://www.aws2005.com/>

Coastal Ecosystems of West Africa (Biological Diversity - Resources - Conservation)

15-16 February 2005, Brussels, Belgium

for more information contact prcm@iucn.org or

download the symposium announcement:

www.imcg.net/docum/wa05.doc

First European Chapter meeting of the Society of Wetland Scientists

Spring, 2005, Hull, United Kingdom

for more information surf to:

biology.bangor.ac.uk/~bss113/SWS_Europe.htm

International workshop on Sphagnum farming

29. April to 1st May 2005, Bremen, Germany

For more information visit:

<http://www.uni-greifswald.de/~sphagnumfarming>.

Peatlands in Saxony

3-5 June 2005, Dresden-Marsdorf, Germany

for more information see <http://www.ecology.uni-kiel.de/~michael/imcg/dgmt0501.pdf>

Shallow lakes in a changing world

5-9 June 2005, Dalfsen, The Netherlands

for more information surf to: www.shallowlakes.nl.

Coastal Plain Wetlands: Ecological, Landscape, and Regulatory Transformations

5-10 June 2005, Charleston, South Carolina, USA

for more information surf to: <http://www.sws.org>

INTECOL ESA joint meeting: Ecology at multiple scales

7-12 August 2005, Montreal, Canada

for more information surf to:

<http://www.esa.org/montreal>.

WETPOL Wetland Pollutant dynamics and Control

4-8 September 2005, Ghent, Belgium

for more information surf to:

<http://www.biomath.ugent.be/wetpol>.

Peat in Horticulture

4 - 10 September 2005, Angers, France.

This joint Symposium of the International Society for Horticultural Science (ISHS) and IPS on Growing Media will be a combination of paper and poster presentations related to growing media and peat as well as excursions to growing media, peat cutting, and horticultural operations. During the conference, there will be a one-day session with emphasis on peat only, entitled "Wise Use" of Peat in Horticulture."

For more information:

www.peatsociety.fi or

www.ishs-angers.agrena.org.

17th Annual Conference Ecological Restoration: A Global Challenge

September 12 - 18, 2005, Zaragoza, Spain

for more information surf to:

<http://www.ser.org/content/2005Conference.asp>

W3M Conference For Wetlands: Monitoring, Modelling and Management

22-25 September 2005, Wierzba, Poland

For more information:

<http://levis.sggw.waw.pl/wethydro>

Ramsar Cop 9

8 - 15 November 2005, Uganda

for more information surf to: www.ramsar.org

IMCG Field Symposium in Tierra del Fuego

21 November - 1 December 2005, Tierra del Fuego, Argentina

for more information see IMCG Newsletter 2004-1 or

<http://www.imcg.s5.com/>

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