INTERNATIONAL MIRE CONSERVATION GROUP

NEWSLETTER

issue 2010/1, January 2010

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 currently 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 (Francis Müller), and 2 additional members (Tatiana Minaeva, Piet-Louis Grundling).

Seppo Eurola, Richard Lindsay, Viktor Masing (†), Rauno Ruuhijärvi, Hugo Sjörs, Michael Steiner and Tatiana Yurkovskaya have been awarded honorary membership of IMCG.

Editorial

This Newsletter contains the first preparations for this year's IMCG General Assembly in Poland, July 17th, 2010. 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 May 15, 2010. Furthermore this Newsletter gives additional information of the field excursion in the weeks before the Conference (5 – 15 July 2010), and on the scientific congress Friday, July16th.

Please register as soon as possible for the field excursion, as there is a fair chance that more people want to attend than is logistically possible and that we have to select…

This Newsletter again pays attention to the last developments with the Climate Convention: what did Copenhagen bring for peatlands? Furthermore you will find contributions regarding peatland destruction and conservation in Alberta (Canada), Tierra del Fuego, Latvia, the Arctic, and various other parts of the world.

The next Newsletter we will devote to discussions in preparation of the General Assembly (see agenda in this issue). We are eagerly awaiting your conference resolution proposals, your contributions on policy priorities, or on whatever subject you think should be discussed. Deadline for the next Newsletter: 15 May 2010.

For information, address changes or other things, contact us at the IMCG Secretariat. 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
Institute of Botany and Landscape Ecology, Grimmerstr. 88, D-17487 Greifswald (Germany)
fax: +49 3834 864114; e-mail: joosten@uni-greifswald.de

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A note from the Chair

Many things have happened in the mire world since the last newsletter – see the reports from Copenhagen, and updates from around the globe in this newsletter. From my own perspective, we are establishing an ex situ population of *Azorella macquariensis*, the endemic peat-forming cushion plant on sub-Antarctic Macquarie Island. This keystone species has suffered massive dieback in the past 12 months and has recently been listed as critically endangered by the Australian Government. The cause of the dieback is not yet clear it may be a combination of the impacts of climate change and secondary pathogens. Further pathology tests and ecophysiology studies are continuing. Also, I am working with my French colleague, Marc Lebouvier, to describe the peatlands of the French sub-Antarctic islands, Iles Amsterdam and St Paul. With the taxonomic expertise of Kjell-Ivar Flatberg, we are currently describing several new species of *Sphagnum* that we collected from Ile Amsterdam.

The next big international event for IMCG this year is the field symposium in Poland in July – details are given in this newsletter. We would welcome members – both old and new – to register to come on this field symposium. There will be an IMCG General Assembly and the agenda is outlined in the newsletter. Consider what you think should be in the IMCG Action Plan for 2010-14 and send us your comments. There will be an election of Main Board members and the Executive Committee. I will be retiring from the position of Chairman at the Poland meeting. I would like to take this opportunity to thank the members of the Main Board for their support over the past 6 years, especially Hans Joosten, John Couwenberg and Michael Trepel of the Secretariat. I think it has been beneficial for the expansion of the effectiveness of IMCG outside its traditional member base in Europe to have a Chairman from the southern hemisphere – I certainly have enjoyed the opportunity to become better connected with my colleagues in countries where peatland research is relatively young, as well as benefitting from the experiences of colleagues that have a long history of peatland research.

I hope to see you in Poland in July.

Best wishes,

Jennie Whinam

REGISTER

Please fill out the IMCG membership registration form.

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

IMCG Finances

by Francis Muller, treasurer

As the new treasurer of IMCG, I would like to give you an overview on the financial state of our organisation and open the debate on the best way to manage our 'treasure'.

Our former treasurer, Phlippe Julve, just transferred IMCG's funds to our new bank account with Crédit Coopératif. The amount available on our account is now €9 347.

Why did IMCG change its bank? Being an NGO under the French law, IMCG must have a French bank account and convenience dictates it is located close to the treasurer. Crédit Coopératif was chosen mainly because of its ethical stance. Part of the bank's investments is devoted to help associations or investors in social and environmental sectors. The bank also created a 'Fondation Crédit Coopératif', which just gave a €30,000 grant for 2010 and 2011 to help restore a mire and opening it to the public in Franche-Comté (NE France).

Having put this in order, we may ask ourselves which financial policy IMCG should follow.

- What do we need money for at IMCG?
- How much money should we have at regular disposal (to be able to face unpredictable projects, events or situations)?
- What are specific projects that would need specific financing?
- Where can money come from? During our last meeting in Georgia, we once again decided than IMCG membership would be free of charge, considering all the complications it would cause to gather money and the wish of being fair to poorer countries.

So, we have to find other ways to raise funds and we may try

- to find private donators, among our members or among non-members
- to find sponsors for specific actions that meet the sponsor's as well as IMCG's interests
- to demand and accept payment for actions by IMCG or IMCG members (if the members accept to donate the payments)
- anything else, serious proposals are welcome...

The Main Board has contributed some ideas already, but other opinions and ideas in this debate ideally including concrete proposals are welcomed from all IMCG members, so that we can try to find convenient solutions to make IMCG an even more efficient organisation, for the best health of mires.

Jenny Whinam thinks that the easiest way to raise funds will be to seek donations from members actively. Several members have made donations in the past and several members have commented that they would be prepared to pay something towards the costs of IMCG. Therefore, she would support a fund raising campaign from members as a first step. The question of third party sponsorship often involves ethical problems and might be best utilised for specific events.

Ab Grootjans thinks that even if we could double the currently available sum, we will still need more to organise meetings or contribute financially to our main communication event, the biennial congress and symposium. Also the deployment of a 'rapid response unit' of people with expert knowledge will take a larger financial buffer as such field visits will be on too short notice to apply for funds.

Ab is involved in a foundation he established with some colleagues. This foundation aims to assist in restoration projects, disperse knowledge, etc. Funds are diverted from projects and consultancy work. After two years the foundation is able to assist small projects, with enough funds to cover travel.

So, why not try something similar in the framework of the IMCG? Besides sponsors, IMCG members can contribute by doing small paid projects or consultancy to finance an IMCG foundation. Most IMCG members will not be in a position to contribute, but few members is all that is needed. Actually, most of the funds currently available originated when IMCG members forfeited their salaries in projects carried by the Global Peatland Fund some years ago.

The amount of money in the IMCG account will largely determine how much we can subsidise the activities of the Main Board (MB) and Executive Committee (EC) and support members. Until now, MB and EC members have used their own funds, often largely paying from their own pocket.

Piet-Louis Grundling believes that expanding and maintaining the IMCG network outside Europe will be a big challenge. Regular face to face meetings amongst the IMCG MB (as well as EC) members are critical and funds should be available towards this end.

It has become clear again during the Georgia and Armenia meeting that IMCG needs to build capacity in regions where it has established a presence. The students and young people that were on the last biennial tour are a good example. They made a huge difference and should be stimulated to remain involved in the IMCG network. A larger number of IMCG representatives in a country will promote IMCG's progress and success. The European support base and the success we see there in contributions to mire conservation and science bear testimony. Applying funds to strengthen the support base in regions such as the Caucasus, South America, eastern and central Africa, South East Asia will prove to be profitable for the IMCG.

Donations to IMCG can be made to the IMCG bank acount: IBAN: FR76 4255 9000 8341 0200 1467 743; BIC (=SWIFT) : CCOPFRPPXXX;
Name : IMCG; Beçanson (France)

IMCG 2010 Field Symposium and Congress in Slovakia and Poland

5 – 17 July 2010

The 2010 IMCG Field trip and symposium will bring participants from the Morawa River in Slovakia to the young glacial lowlands (Lithuanian Plain) of north-eastern Poland not far from the Baltic Sea. We will see different mire types, but the emphasis is put on more or less calcareous (rich) fens. The latitudinal extent of the trip will allow us to see the geographical variation of these mires, as well as their dependence on different local types of human impact.
In Slovakia and southern Poland we will explore the unique world of the Carpathians, with their highest part – the Tatra mountains.
All along the road we will have a chance to observe the influence of major socio-economical changes – a transition from real socialism to free market economy – on the organisation and practice of nature protection. We will visit several protected areas and Natura 2000 sites, where we will be guided by numerous local site managers, scientists and nature lovers.
The IMCG trip and symposium 2010 is organized by the State Nature Conservancy of the Slovak Republic, DAPHNE (Institute of Applied Ecology) and the Institute of Botany of the Slovak Academy of Sciences and further by the West Pomeranian University of Technology, the Wetland Conservation Centre (CMok), the Department of Plant Ecology and Environmental Conservation of the University of Warsaw and the General Directorate for Environmental Protection of the Republic of Poland.

Recommended reading:
About mires in Slovakia and Poland see following chapters in: Steiner GM (ed.) (2005) Moore – von Sibirien bis Feuerland / Mires – from Siberia to Tierra del Fuego. Biologiezentrum der Oberösterreichischen Landesmuseen, Linz.
Grootjans A., Alserda A., Bekker C. W., Janakova M., Madaras M., Stanova V., Ripka J., Van Delft B., Wolejko L. 2005: Calcareous spring mires in Slovakia; Jewels in the Crown of the Mire Kingdom: 97-116.
Wolejko L., Herbichowa M., Potocka J. 2005: Typological differentiation and status of Natura 2000 mire habitatas in Poland: 175-219.

About management of wetlands in the transition from socialism to capitalism see: Grootjans A.P, Wołejko L. (Eds.), 2007. Conservation of wetlands in Polish agricultural landscapes – Ochrona mokradeł w rolniczych krajobrazach Polski. Oficyna In Plus, Szczecin - Wołczkowo: 1-111.

The preliminary schedule of the IMCG 2010 Field Symposium is as follows:

Slovak Republic

DAY 1 Monday 5 July 2010
Arrival in Bratislava, welcome event at 18.00; accommodation in Bratislava.
Depending on arrival time, a walking tour for participants can be organized in Bratislava. A walking tour of the charming squares, courtyards, and narrow lanes of the Old Town includes the Main Square, Old Town Hall, Primate's Palace, St. Michael's Gate, Franciscan church, first Hungarian University Academy Istropolitana, St. Martin's Cathedral, the Slovak National Theatre and other significant historical sights.

DAY 2 Tuesday 6 July 2010
Field excursion to Abrod and the Morava River Floodplain in western Slovakia
The National Nature Reserve *Abrod* is one of the most important fen grassland sites in Slovakia and is a refuge for many rare and endangered plants and animals. The regulation of the small river Porec and associated drainage in the 1960s has caused severe damage to the nature reserve. Since 1994, DAPHNE in co-operation with the Administration of Protected Landscape Area Záhorie has carried out activities to protect the reserve and study the ecological relationships at this exceptional locality. Plans to improve the hydrology will be presented and discussed.
The *Morava River Floodplain* is located in the western part of Slovakia, and was part of the former "Iron Curtain", which was closed down in 1990. The Morava River forms the border between the Slovak Republic and Austria in the lower section, and between the Slovak and Czech Republic in the upper section. The most valuable ecosystems are the species-rich meadows that make up the largest complex (30 km^2) of floodplain grasslands in Central Europe, and harbour a large number of rare and endangered meadow birds.
Travel to Varín and Štefanová in Malá Fatra Mts., dinner and accommodation

DAY 3 Wednesday 7 July 2010
Field excursion to Močiar in Malá Fatra Mts. and the Nature Reserve Poš.
The *Močiar* Nature Reserve represents the largest, the most species rich and well-preserved travertine spring fen in Slovakia with active precipitation of calcium carbonate and calcium sulphate. The Močiar Nature Reserve was heavily damaged in 2005 when the mayor of the neighbouring village decided to excavate a bathing pool in the fen. Spring water is drained from the fen and half of the locality is without proper water supply. Restoration measures were not implemented so far; although the site is legally protected.
Lunch and travel to the foothills of Tatra Mts.

The Poš Nature Reserve is situated not far from our accommodation and is an example of a poor fen and harbours some species that are highly endangered in the Slovak republic (e. g. *Carex limosa, Utricularia minor*).
Dinner and accommodation at Tatranské Matliare

DAY 4 Thursday 8 July 2010
Belianske lúky, the largest and best-preserved calcareous fen in Slovakia, is located at the base of the High Tatra Mountains. The reserve is about 100 hectare in size and fed by calcareous groundwater that is regularly depositing travertine on the surface of the mire. The presence of many rare plant species, and communities, makes the area of high ecological value. The main problem in the area was the rapid encroachment of shrubs, trees and reeds due to the lack of traditional mowing. The hydrology of the spring system has also been influenced by upstream drainage systems. DAPHNE in cooperation with universities from the Netherlands and Poland carried out ecohydrological research as a basis for further restoration of the site. Recently, shrubs were removed and regular mowing was introduced again.
Lunch at Spišská Belá hosted by city mayor. Sivá Brada and/or Spiš Castle – optional.
Sivá Brada, situated near the Spišská Kapitula, consists of a large travertine hill with several active springs. The hill itself was created by regular deposition of travertine ($CaCO_3$) from spring water at the top. Later a little church (Chapel of the Holy Cross) was build on the top after the springs started to discharge downslope. Sivá Brada is a rare geological phenomenon in Slovakia. It is relatively young (less then 10 000 years old, and the springs are still depositing travertine. Most of the spring water is discharging at the sides and the base of the cupola and the white layers of travertine are very conspicuous. The vegetation consists of xerothermic, halophytic and calcareous fen and fen meadow species.
The ruins of *Spiš Castle* are situated in the Spišská Nová Ves district on an impressive travertine cliff. It is the largest Royal Gothic castle in Central Europe. Large parts of the castle have been renovated and turned into a museum. Restoration activities are ongoing.
Dinner and accommodation at Tatranské Matliare.

DAY 5 Friday 9 July 2010
Bor Nature Reserve and Belianska cave (optional).
The Nature Reserve *Bor* belongs to the largest mountain bogs in the Tatras foothill area. It is dominated by spruce-forests and *Ledum* pine forests.
The National Nature Monument Belianska Cave is a stalactite cave in the Slovak part of the Tatra Mountains. The cave was discovered in the 18th century, although it is presumed that it was used by pre-historic people. The cave is 3,641 m long, with two circuits available to the visitors, with the longer one having a length of 1,752 m.
Departure from Slovakia, crossing at Lysa Polana.

Poland

DAY 5 Friday 9 July 2010 contd.
Mires of the *Orava –Nowy Targ Basin*. These are submontane bogs and fens under severe threat.
Accommodation in the Podhale region, Poland.

DAY 6 Saturday 10 July 2010
Rich fens of the Nida valley.
Travel to *Nida Valley*. Species-rich rich fens on calcareous (gypsum) bedrock threatened due to drainage and reed expansion. Calcareous groundwater regularly deposits travertine on the surface of the mires. Wetland vegetation next to xerothermic grasslands on the valley slopes.
Accommodation in the Holy Cross Mountains region.

DAY 7 Sunday 11 July 2010
Calcareous fens of the Vohlynia region.
Torfowisko Sobowice Nature Reserve – soligenous fen with an extraordinary number of rare vascular plants and unique invertebrates, especially butterflies (including a number of UE Habitat Directive species, like *Ligularia sibirica, Euphydryas aurinia* and *Coenonympha oedippus*). Severely threatened due to the close location of water abstraction for the town Chelm. We will show the results of large-scale conservation activities (shrub removal) carried out by the Wetland Conservation Centre in co-operation with the Administration of the Chelm Landscape Parks in the years 2007-2009 (LIFE Nature project).
Brzeźno and Bagno Serebryskie nature reserves – last remaining calcareous fens on chalk bedrock in Poland. The fens are large covering several hundreds of hectares. Vegetation consists of *Cladium* communities, *Schoenus*-brown moss vegetation, extremely species-rich *Molinia* meadows and mineral islands with orchid-rich xerothermic grasslands. The fens are threatened due to lowering of water tables by neighbouring chalk mining industry (Chelm cement mill). We will discuss problems of land management in former collective farming (State Agricultural Farm) areas.
Chelm Chalk Tunnels (optionally). Located under an old town of Chelm, the Chelm Chalk Tunnels are a unique example of Middle Age chalk mining. They were dug by the Chelm citizens straight from their cellars. After centuries of exploitation a unique chalk labyrinth resulted.
Accommodation in Chelm.

DAY 8 Sunday 12 July 2010
Peatlands of the Polesie and Mazovia regions.
Moszne Lake in the Polesie National Park – bog development during terrestrialization. Poor fen and bog vegetation are typical for the Polesie region.
Krowie Bagno, the largest peatland in southern Poland (ca. 4000 ha) that developed on calcareous bedrock. Degraded due to intensive drainage and intensive land use. Remnants of *Betula humilis* shrublands and *Molinia* meadows. We will discuss

the perspectives of severely degraded wetland restoration.
Całowanie peatland in the Mazovia Landscape Park – severely degraded rich fen ecosystem in the Vistula valley. Results of the restoration projects carried out by the Wetland Conservation Centre in the years 2004-2009. Topsoil removal experiments.
Accommodation in Osieck.

DAY 9 Tuesday 13 July
Biebrza National Park
Lower Biebrza Basin – largest Central European open rich fens in the Bagno Ławki area. This is a famous bird area of international importance. We will discuss problems of suppressing the secondary succession by mowing and shrubs removal.
Red Bog nature reserve in the Middle Biebrza Basin. Large area (nearly 12 000 ha) of strict nature reserve established in the year 1925. The reserve is famous because it was the last refugee for the European elk in Poland after World War II. We will discuss problems of vegetation shift from fen to bog after hydrological changes in the Biebrza area in XIX century. We will see the unexpected persistence of species-rich *Molinia* communities in abandoned meadows under heavy pressure of herbivores (including European elk).
Accommodation in Kuwasy.

DAY 10 Wednesday 14 July
Rich fens of north-eastern Poland including Rospuda valley
Rospuda valley – famous rich fen area considered to be the last pristine percolation mire in the temperate zone of Europe. Species-rich brown moss-sedge vegetation with the most numerous Polish populations of internationally threatened *Liparis loeselii* and *Saxifraga hirculus*. We will see and discuss the zonation of vegetation, hydrology and hydrochemistry in an undisturbed river valley. The mire was threatened by the construction of a high way (by-pass of Augustow town), but in the year 2009 the threat was eliminated and the road construction abandoned, thanks to mass protests in Poland and abroad, NGO participation and involvement of the European Commission in Brussels.
Upper Biebrza Basin – a site of famous eco-hydrological research during the last decades. Problems of acidification of brown moss-rich fens and invasion of *Sphagnum*.
Sidra spring fen – with ~7 m, this site presents us with the highest known spring fen cupola in Poland. We will discuss problems of development and stratigraphy of cuppola-fens.
Accommodation in Augustow.

DAY 11 Thursday 15 July
Fens and bogs of the Augustow Forest and Romincka Forest
Lempis nature reserve – calcareous shallow lakes with *Cladium* communities overgrown with *Sphagnum fuscum*-dominated poor fen and bog-like vegetation. Extraordinary ecological gradients.
Suchary nature reserve in the Wigry National Park - small dystrophic lakes surrounded by floating poor fens, typical for young-glacial landscape of northern Poland.
Zytkiejmska Struga nature reserve in the Romincka Forest Landscape Park - active cupola-forming spring fen with numerous rare vascular plants and bryophytes. The site of the classical spring fen research by the German botanist H. Steffen.
Mechacz Wielki nature reserve in the Romincka Forest Landscape Park – best preserved open raised bog in north-eastern Poland. The reserve has numerous boreal species, including *Rubus chamaemorus*. Species-rich spruce forest are present at the mire margins.
Accommodation at Goniadz.

DAY 12: Friday 16 July
Scientific Conference at Goniądz: "Mire ecosystem dynamics and biodiversity conservation".

DAY 13: Saturday 17 July.
Morning: General Assembly.
Afternoon: Departure to Warsaw.

The Scientific Congress "Mire ecosystem dynamics and biodiversity conservation" will be organised in co-operation with the Warsaw University of Life Sciences.
Abstracts of ½ page, should be submitted before April 30th, 2010.
For practical reasons the secretariat for the Conference in Goniądz will be with the Wetland Conservation Centre (previously CMok) in Warsaw, Poland. Contact person (Scientific Secretary of the Conference) is Mr. Lukasz Kozub, e-mail: confgoniadz2010@bagna.pl
Preliminary agreement has been reached on publishing quality post-conference articles in a Special Issue of the Annals of Warsaw University of Life Sciences – SGGW.

Fees
For the whole event (Field Symposium Slovakia – Poland and Scientific Conference): IMCG Members: 800 €; Non Members: 900 E. For the Scientific Congress and General Assembly only: 150 €.
We may consider accepting participation only in a partial program e.g from Warsaw onwards (13-17 July) for a proportional price.
Registration for the Field Symposium and payments should be made to:

Ms. Ema Gojdicova, State Nature Conservancy of SR
Regional office in Presov, Hlavna 93, 080 01 Presov, Slovakia, ema.gojdicova@sopsr.sk
Tel.: +421 51 7567 414; Fax: +421 51 77 249 71

Bank details:
Account number: 7000315397/8180
Name of bank: Statna pokladnica

IBAN: SK3781800000007000315397
BIC/SWIFT: SUBASKBX
Variable symbol: 201007

For additional information ask:
Leslaw Wolejko, West Pomeranian University of Technology in Szczecin, Slowackiego 17, 71-434 Szczecin, Poland.

Leslaw.Wolejko@zut.edu.pl or ales@asternet.pl
Paweł Pawlikowski, University of Warsaw, Aleje Ujazdowskie 4, 00-478 Warsaw, Poland,
p.pawlikowski@uw.edu.pl

Text provided by Leslaw Wolejko, Viera Stanova, Pawel Pawlikowski and Ab Grootjans

General Assembly Goniądz (Poland), 2010, July 17th.

17 July 2010

Nominations for the IMCG Main Board
On our General Assembly in Poland 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 15 May 2010, 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 as soon as possible.

On the IMCG General Assembly on Saturday 17 July 2010 in Goniądz (Poland) 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 email, like we have done with earlier General Assemblies.
This Newsletter contains the preliminary agenda for this Assembly (that will be available on our website as well) and at the end of May 2010 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 and for Honorary Life membership, etc. until 15 May 2010. Send the material in as soon as possible – the sooner the better – so that we can arrange the democratic procedures in a smooth way.

The *preliminary agenda* of the IMCG General Assembly is as follows:

1. Opening and Welcome
2. Minutes of the General Assembly of 22 July 2006 in Tammela, Finland (available in IMCG Newsletter 2006/3)
3. Balance sheet and the statement of profit and loss
4. Biennial report (2006 – 2010) on the state of affairs in the IMCG and its policy including an evaluation of the Action Plan 2006 – 2010.
5. IMCG Action Plan 2010 – 2014
6. IMCG Membership fee
7. Election of the Main Board (with associated elections of the Executive Committtee members, incl. chair, by the MB)
8. Conference resolutions
9. Next venues
10. Nomination of Honorary Life Members
11. Any Other Business

IMCG Resolutions
The IMCG General Assembly in Poland 2010 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 May 2010, 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.

Getting peatlands under Kyoto: Arriving in Copenhagen – and now what?

by Hans Joosten

In previous Newsletters we have followed the long and winding road to Copenhagen and explained what the major difficulties are to get peatlands into the Climate Convention. From 7 to 18 December 2009 the 15th Conference of Parties to the UNFCCC and the 5th Meeting of Parties of the Kyoto Protocol (COP15/MOP5) took place in Copenhagen. Again, there were some developments on the peatland front, but most results were overhauled by global politics that in the end made Copenhagen look like a fiasco. What did happen, and what may be expected from the time 'after Copenhagen'? A report from the inside.

Negotiating climate

Whatever you want to reach under the Climate Convention, you have to formulate it. And you have to find formulations that satisfy *all* parties, because the Convention works by consensus: everybody has to agree otherwise a proposal is not accepted. This does not mean that everybody has to be happy with the decision – a good compromise makes nobody really happy – but it implies that all parties must be able to live with it. Either the pain has to be not that heavy or it has to be compensated by a benefit for the disadvantaged party on another field. Such is politics…

A lot of talking went on in Copenhagen to address the problems that parties might have with a proposal. These problems are not always made explicit but may be hidden behind false arguments, because countries do not want to reveal their real worries. Progress means laborious exchange of one word for another until fewer and fewer parties oppose the proposition.

Peatland phrasing under Kyoto

As we wrote in the previous Newsletter, the UNFCCC meetings in Bangkok (September/October 2009) and Barcelona (November 2009) had arrived at the following phrasing of a possible new activity under the Kyoto Protocol:

"*Wetland management is a system of practices for rewetting and draining on land [that covers a minimum area of [0.5 ha] [X ha]] [resulting in accountable greenhouse gas emissions by sources and removals by sinks]. It includes all lands drained and all lands rewetted since the base year, provided that these lands are not included under other mandatory or voluntary activities elected.*

The brackets [] indicate alternatives or freestanding text on which no agreement had yet been reached.

In the beginning of the Copenhagen meeting, a selection of Annex 1 parties (industrial countries) gathered and formulated a variant of this text:

"Wetland management" is a system of practices for rewetting and draining on land that covers a minimum area of 1 ha. It includes all lands drained and all lands rewetted [since the base year], provided [that these activities have taken place since 1990 and] that these lands are not included under any other activity.

This text was communicated to the G77 and China (the developing countries) who on their turned discussed it among themselves and came with the following alternative:

"[Wetland]["Peatland] management" is a system of practices for stewardship and use of [wetlands][peatlands] that have an effect on [greenhouse gas emissions and removals] [carbon stock changes], including drainage of [wetlands][peatlands] and restoration of drained [wetlands][peatlands]

The G77 and China internally also formulated a possible text for agreement:

"Wetland management" is a system of practices for rewetting and draining on land that covers a minimum area of 1 ha. It includes all lands drained and all lands rewetted, provided that these activities have taken place since 1990 and that these lands are not included under any other activity.

The latter proposal came then back in an Annex 1 discussion group that slightly rephrased it to:

"Wetland management" is a system of practices for rewetting and draining on land that covers a minimum area of 1 ha. It includes all lands drained and all lands rewetted, provided that these activities have taken place since 1990 and that these lands are not accounted for under any other activity.

The only difference between the two proposals was thus to exchange "not included under" with "not accounted for". This change is crucial, however. Almost all drained peatlands *are* included under one of the activities recognized under the Kyoto Protocol, i.e. either under 'forest management', 'cropland management', 'grazing land management' or under 'revegetation'. Unless these activities are selected in their entirety on a voluntary basis peatlands will not be accounted for. Thus "wetland management" as a separate activity (see below) would not be possible under the definition of the G77 and China.

Then suddenly some parties of the EU wished to make the phrasing more consistent with the guidance of IPCC (that does not know terms like 'draining' and 'rewetting') and to phrase the definition to something like:

"Wetland management" is a system of practices that artificially changes the water table on land that covers a minimum area of 1 ha. It includes drainage of land and restoration/rewetting of drained land since 1990, provided that these lands are not accounted for under any other activity.

Furthermore, the comments criticised that the type of accounting would be different from usual (which would annoy the accountants) and that the definition had the smell of "cherry picking", i.e. it would not be balanced.

It was, however, clear that we could not refer to "change in water table" because then this activity would include 'flooded land'. This inclusion is not intended, because it would raise objections by several countries with important hydro-electricity ponds that can cause substantial greenhouse gas emissions…

The most important aspect of above definition is that it opens the possibility to rewet drained lands that are currently used as forest, cropland, grassland or wetland. This can be done without electing the associated activities 'forest management', 'cropland management', and 'grazing land management' (for wetlands no associated activity under the Kyoto Protocol exists) or 'revegetation'. Countries are currently very reluctant to choose these activities because of the large effort and the limited profit.

We maintained that the definition is fully symmetrical and balanced: it includes *all* lands where changes in the status of drainage and rewetting (fully complementary practices) have taken place since 1990 and covers *all* practises and *all* GHG fluxes occurring on *these* lands. The definition indeed does not cover *all* lands that ever since history have been drained, because lands where no changes in hydrological status have occurred since 1990 would give a zero-sum under net-net accounting[1]. The definition opens possibilities to reduce substantial emissions from land. This is indeed 'cherry picking', in the sense that options with the largest cost-effectiveness are used, but it is not 'cherry picking' in the sense that it would involve loopholes or double accounting.

A final concern was raised by the Netherlands that feared that under the last Annex 1 definition of 'wetland management' "the entire area of the Netherlands would be classified as wetland".

In the discussions we made clear that the definition deals with an activity that may take place on *all* land (in concordance with the 'activity-based' character of the KP). It is *not* limited to the land use category 'wetlands' nor does it *define* a land as a 'wetlands'. Confusion might indeed occur because the word 'drained' may be perceived both as an 'activity' and as a 'status' (= the result of an activity). The definition should clearly refer to the *activity* of *initial* drainage of an area that must have taken place since 1990 (which applies in the Netherlands to no area of relevance). It does *not* refer to the status of 'having been drained and kept in a drained state', which would indeed cover almost the whole Netherlands. It was clear that the definition had to be rephrased to clearer reflect what is meant with drainage and rewetting.

After further deliberations the European Union expressed their willingness to agree with the following definition:

"Wetland management" is a system of practices for rewetting and draining on land that covers a minimum area of 1 ha. It includes all lands that have been drained and/or rewetted since 1990 and that are not accounted for under any other activity, where drainage is the artificial lowering of the soil water table and rewetting is the partial or total reversal of drainage.

To exclude 'flooded land' 'rewetting' was defined in relation to 'drainage', i.e. as the reversal of drainage (see IMCG Newsletter 2009-3/4).

An associated accounting rule (but this was not yet widely discussed) could be:

For the second commitment period, accountable anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from "wetland management" under Article 3, paragraph 4, shall be equal to anthropogenic greenhouse gas emissions by sources and removals by sinks in the commitment period, less [five][X] times the anthropogenic greenhouse gas emissions by sources and removals by sinks resulting from this activity in the base year of that Party, while avoiding double accounting, provided that methodologies are available.

This simply means that only the differences in anthropogenic emissions between the commitment period and the base year will be accounted for the lands concerned. The somewhat complicated *[five][X] times* phrasing is there because the compliance period covers several years (for the first commitment period 2008-2012 five years), whereas the base year (currently 1990) is only one.

Peatland phrasing under REDD

Peatland was also discussed under REDD (Reducing Emissions from Deforestation and forest Degradation). Here the discussion continued whether soil (peat) carbon is an integral part of the forest carbon or not. Another point of discussion was whether the carbon lost from deforested peat soils (such as in the Ex Mega Rice Project area in Kalimantan) still can be considered as 'forest carbon'.

On the latter also the conservation organisations found no agreement among themselves. If emissions from peat would be properly accounted for, it would be much easier to keep oil palm out of the peatlands, because you could offer substantial REDD money as an alterative. Greenpeace, however, opposed the inclusion of emission reductions from deforested peat soil in REDD, because these low cost/high tonne opportunities would soak up funds that might otherwise protect intact tropical forest landscapes on mineral soils. On the other hand, if soil carbon is excluded from REDD, plantations will focus on peatlands, because one could earn more REDD money by protecting tropical forests on mineral soils that have a larger biomass carbon stock. This would lead on paper to less emission, but in reality to much more emissions from the drained peat soil.

The current position of peat under REDD after Copenhagen is not explicitly formulated. The final

[1] In net-net accounting, net emissions in the compliance period are compared to net emissions in the base year.

(but not yet adopted) REDD texts talk about 'forest carbon stocks' or even simply 'carbon stocks', i.e. the stocks are not explicitly limited to 'living biomass'. So you can argue that the soil organic carbon (incl. peat) is an implicit part of the 'forest'. The REDD text furthermore "requests the Subsidiary Body for Scientific and Technological Advice to identify land use, land-use change and forestry activities in developing countries, in particular those that are linked to the drivers of deforestation and forest degradation, to identify the associated methodological issues to estimate emissions and removals resulting from these activities, and to assess their potential contribution to the mitigation of climate change." This opens up some potential to broaden the REDD mechanism to all land use and land use changes.

Also the current status of REDD is not completely clear. Tony La Viña from the Philippines, who chaired the REDD working group in Copenhagen provided the following judgement: "People have been asking me what happens to REDD+. The Copenhagen Accord has two paragraphs about it so it could be launched next year. The REDD+ decision I facilitated could be used to govern this but that would be up to those who join the Copenhagen Accord."

Politics beyond definition

As we have seen in IMCG Newsletter 2009-3, there are four major options to bring peatlands better under the Kyoto Protocol:

1. Adopting a land-based approach;
2. Increasing the number of mandatory activities in a still-activity based Protocol;
3. Stimulating the voluntary accounting of current art. 3.4 activities;
4. Creating a new voluntary activity in the Protocol.

The political support for the most comprehensive 'land-based approach' is still very limited. A proposal of Papua New Guinea has no chance of being adopted for the second commitment period. Many countries do sympathise with the option, but argue that they are not yet able to manage the necessary inventory and monitoring. Some countries propose to go for a full land-based approach in the third commitment period (after 2018/2020?), but this has not yet materialized in concrete proposals.

There is substantial political support for increasing the number of mandatory activities and to move activities from art. 3.4. to art. 3.3 of the Protocol. The largest chances exist for 'forest management'. Many countries think they will benefit from this, at least when the concrete accounting rules are adapted, which in itself is a wide field of discussion. Furthermore, 'forest management' is related to the already mandatory art. 3.3 activities 'afforestation', 'reforestation' and 'deforestation'. And last but not least the LULUCF sector *must* do something: it cannot expect the entire Protocol to increase its efforts in reducing GHG emissions, but do not contribute itself. Whether the latter drive will also inspire making more activities mandatory is doubtful, however.

The chances of increased voluntary accounting of current art. 3.4 activities are also small. Why would countries suddenly start doing what they until now have refused to do?

The last option 'creating a new voluntary activity 'wetland management' under the Kyoto Protocol has been most widely discussed, as is illustrated by the definition review above. Whether a definition on which everybody agrees also leads to including this activity in the Kyoto Protocol and whether this activity will be effectively implemented, is a function of considerations beyond the technical discussion on 'wetland management'. Here the big politics start playing.

The big politics

Next to a lot of debating on wording, Copenhagen was dominated by the bigger political issues. Will the Kyoto Protocol – in which only industrial countries have to deliver – be maintained (as the G77 and China would like) or will it be integrated in a more comprehensive treaty that also includes obligations for the developing world? And which part of the Kyoto Protocol will be transferred to this new global treaty and what will be left out? Such questions blocked progress of the discussion several times when groups of states demanded clear guarantees that the Kyoto Protocol would continue.

Will all forms of emission reductions be equally accountable? Also with respect to this question the G77 and China considered a strong position regarding LULUCF. They were not enthusiastic at all about the new issues proposed for the Kyoto Protocol, including (not) accounting for 'natural disturbances' (fire, insect outbreaks, storms) and the flexible approaches to reference levels in forest management (to cope with different age structures of national forests). They expressed doubts on the inclusion of 'harvested wood products' and 'wetland management'. And they considered a cap on the amount of emission that may be reduced through LULUCF. In the IMCG Newsletter 2009-3/4 we have already discussed the global inefficiency of limiting the number of options to solving global problems ("It is always smarter to reach the same goal in a cheaper and easier way").

But not only global considerations steer the negotiations: also national interests or interests of the leading class in a country may play an important role. The G77 and China do not only plea for maintaining the Kyoto Protocol because it is the only legally binding instrument with real reduction targets under the Climate Convention. As the Nigerian delegate expressed it in the plenary: "You should not kill the mother, before the child is born" (…). Indeed it is still unclear what an alternative new treaty would bring. But it is obvious that the industrial states want legally binding commitments for at least the most important developing countries as well – and that gives pleading for Kyoto another flavour…

The request for a cap on emission reductions reached though land use activities goes back to the special situation in the history of the Kyoto Protocol. With the adoption of the Kyoto Protocol the reduction goals of Annex I countries were fixed. Only many years later the instruments, like LULUCF and CDM, were adopted. Indeed, when the reduction aims are fixed, but the number of mitigation mechanisms is growing, true reductions of fossil-fuel emissions will become smaller. This situation does not hold for the second commitment period, for which neither the goals nor the mechanisms have been decided yet. The reasons for the G77 and China to cap accountable emission reductions from land use are certainly sincere when considering the many loopholes and 'pick-and-choose' possibilities. It is indeed risky to trust such an uncontrolled system with large power over the mitigation obligations. On the other hand, a cap would reduce the options for industrialized countries to reduce emissions in their own countries and they would have to reach their goals by investing in the developing world, via CDM or via REDD. Capping emission reductions from peatland rewetting then is not only a matter of climate but also of global redistribution of wealth…
The entire process of climate negotiations is extremely complex and difficult. And this complexity has also caused Copenhagen not to be what many had hoped for.

What did Copenhagen bring?
Copenhagen did not deliver what many had longed for: no targets for reductions, no legally binding treaty, not even a deadline for reaching a binding treaty and no clarity on climate funds.
The reasons for the 'failure' are also clear: the negotiations were badly prepared, overloaded and too complex, global powers refused to take global responsibility, with short term national interests blocking global progress.
As one commentary said: "There were only heads of state present, no world leaders". For me the latter became especially apparent when – in the final phase of the convention – it was proposed to use the 'friends of the chair' construct, in which the chair invites a few persons with real overview and authority to bring stuck negotiations further. The G77 immediately reacted: "we are all friends of the chair" and demanded at least 25 delegates of its group to represent all its interests. I am the last one to deny that the differences of interests within the G77 are small. The group includes the poorest of the poorest countries as well as the rapidly developing new giants like China, India, Brazil and South-Africa. But to demand 25 persons to represent these interests sounded to me as a confession that 'indeed we have no people who can take a global stand'. Where are the people who can take a really universal stand, who can forget who they are, where they come from, and when they live? People who can fairly take the interests into account of all people in the world and those who will come after us and who can propose decisions that can be universally accepted?…

Considering these complications, the outcome was not that bad. We may not have an official decision by consensus, but we have a Copenhagen Accord that is extremely widely supported. It may not be legally binding, but never in history have so many and so many important countries acknowledged that substantial cuts in carbon emissions have to be pursued and that the goal should be to remain below 2 degrees of global warming. The long-term financing may not be clear, but there is a substantial start-up fund. The developing countries may not yet be included sufficiently in the global climate challenge, but the Kyoto Protocol with its legally binding emission reductions for rich nations is maintained.
It is certainly not enough, but it is a reasonable basis for negotiating a fair and effective climate treaty in 2010.

And peatlands?
With respect to greenhouse gases, the IMCG Action Plan 2007 – 2010 had, among others, formulated the following tasks:
- The promotion of the importance of peatland as carbon stores of global importance within UNFCCC and other relevant international conventions
- The exposition of degraded peatlands as substantial sources of GHG emissions
- The assessment of the contribution of degraded peatlands to the global anthropogenic GHG emissions
- The stimulation of systematic incorporation of peatlands in the national inventories of GHG sources and sinks under the UNFCCC
- The improvement of peatland carbon inventory data
- The revelation of the cost-effectiveness of GHG emission avoidance through peatland restoration
- The development and implementation of new financial mechanisms for peatland conservation for carbon storage
- The incorporation of peatlands in national adaptation action plans
- The support of carbon conservation in peatlands parallel to the wise and sustainable utilization of peatlands.

Whereas not all of our aims with respect to UNFCCC have been fully achieved, I think that the global mire and wetland conservation movement has succeeded in bringing the issue a lot further during 2009.

Peatlands are better in the picture than ever!

For a list of countries that have signed on to the Copenhagen Accord, surf here: http://tinyurl.com/Cphagen

Peatlands and oil sands, should we be concerned?

by Martha Graf & Line Rochefort

Canada's boreal region is one of the largest intact ecosystems on the planet, containing a quarter of the world's frontier forests (Bryant et al. 1997). It provides habitat for migratory songbirds, waterfowl, bears, wolves and the world's largest heard of caribou (Schneider & Dyer 2006). Canada's boreal zone is of international importance because it stores more fresh water in its wetlands and lakes and more carbon in its soils, forests and peat than anywhere else in the world (Schneider & Dyer 2006). The boreal region of northern Alberta is described as a mosaic of wetlands and uplands with wetlands making up over 50% of the land base. Of these wetlands, over 90% are peatlands (Vitt et al. 1996). Peatland complexes are dominated by wooded fens and bog islands (Vitt et al. 1996).

Oil sand mining

In this same region, oil sands mining development is occuring at an astonishing pace. Since 2000, the industry has expanded significantly, and production now exceeds one million barrels crude oil per day (Bott 2000). Approximately 2 tons of oil sand is needed for each barrel of oil. The total area deemed suitable for surface mining is circa 2500 km^2 and active mining is occurring on over 250 km^2 (Woynillowicz et al. 2005). When this area is fully developed, it will probably be the world's largest open-pit mining complex (Schneider & Dyer 2006).

Although currently most oil sands mining is occuring in open-pit sites, other mining techniques will become increasingly important in the next decades. Over 80% of the oil sands deposits are deep below the surface and must be extracted using 'in-situ' techniques (Alberta Energy and Utilities Board 2005). The primary technique used is injecting high-pressure steam into the underground deposits which liquefies the bitument so that it can be piped to the surface (Bott 2000). If all available resources are mined, the area affected by in-situ mining would correspond to 138,000 km^2 – approximately the size of Florida and fifty times larger than that of the open-pit mined area (Figure 2) (Schneider & Dyer 2006).

A

B

C

Figure 1 (right column). *Landscapes of northern Alberta. An undisturbed mosaic of uplands and wetlands (A), an open-pit mined landscape (B), and seismic lines well pads and facility for in situ oil sands development (C). Sources: http://ngm.nationalgeographic.com/2009/03/canadian-oil-sands/essick-photography (A & B) and Schneider & Dyer 2006 (C)*

Figure 2. Map of open-pit and potential in situ oil sand mining sites of Alberta (Schneider & Dyer 2006).

Oil sand mining: impact on peatlands

The energy sector has been identified as the greatest source of disturbances to peatlands of boreal Alberta (Forest 2001). Habitat destruction associated with open-pit mining leaves huge ecological footprints (Figure 1b). To date, approximately 500 km^2 have been disturbed (Grant et al. 2008). Thirty-one percent of this landscape is covered by peatlands – approximately 155 km^2 of peatlands thus have been destroyed, which adds up to 0.15% of the disturbed peatlands in Alberta as estimated in 1995 (Vitt et al. 1996).

Where pre-mined landscapes are dominated by peatlands, post-mined landscapes will be dominated by lakes which currently cover 130 km^2, or 27% of the post-minded landscape (Grant et al. 2008). These lakes contain water contaminated with higher salinity, naphthenic acids and heavy metals (Grant et al. 2008). Will peatlands be able to establish in areas with high concentrations of oil sand process affected water? Pilot projects are being undertaken by the two largest oil companies to 'recreate' peatlands in the post-mined landscape (Graf et al. 2009; Wytrykush et al. 2009). Research is being conducted by the oil companies to target peatland plants that will tolerate water affected by the mining process.

Linear disturbances associated with conventional oil and gas as well as in situ oil sands mining (i.e. roads, pipelines, seismic lines, power transmission lines) are considered less intensive because they essentially leave the landscape intact (Figure 1c). However, due to the sheer geographical extent of these disturbances, some believe they have the single largest impact on boreal peatlands of Alberta (Forest 2001). Applications for 924,016 km of seismic lines were approved between 1979 and 1995, over 88,588 well sites existed by June 1997, and over 73,103 km of pipeline have been laid by December 1996 in northern Alberta (Alberta Environmental Protection 1998). The main effects on peatlands caused by these disturbances are 1) fragmentation of the landscape, 2) destruction of habitat, 3) changes to hydrology caused by drainage and compaction, and 4) soil and water contamination from hydrocarbon spills or mineral/clay soils used for construction. The best way to mitigate these effects is through improved management practices and restoration of affected areas which are no longer in use.

Conservation issues

Northern Alberta is mainly public land. In 1993 the Alberta Water Resource Commission released a draft policy for managing peatlands in Alberta's unsettled area. The unsettled area makes up 53% of Alberta and contains the majority of the province's peatlands. This policy was never ratified and currently there is no policy for provincial peatland conservation or management in Alberta. The provincial draft policy does not endorse a "no net loss of wetland functions" principle like the federal policy does. Alberta Environmental Protection (1994) provided a course guideline for protecting 400 km^2 of peatlands in the oil sands region; however, reserves have not been set up. Vitt et al. (1996) criticize these conservation guidelines because bogs and fens with internal lawns are underrepresented. These landforms represent high landscape heterogeneity and should be a priority for conservation (Vitt et al. 1996).

The vast majority of disturbed peatlands are not restored. Presently, the Alberta government does not require decommissioned well sites, roads or pipelines located in wetlands to be restored back to wetlands (Alberta Environment 1995), and it will not require this in the near future (Reclamation Criteria Advisory Group, 2008). Creating peatlands in the post-mined landscape of open-pit mining has begun, but will address only a small percentage of the landscape. While development of the oil sands area is certain, the footprint of these disturbances could be reduced greatly by improved management practices and restoration of sites after decommissioning.

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After-word on oil sands and peatlands

by Tatiana Minaeva

If we look at oil sand mining, what do we see? On first view we see disaster. If our Russian oil companies need a green leaf to demonstrate how 'clean' they are, they could compare themselves to companies mining oil sands in Alberta, Canada. The open mining areas are an ecological catastrophe (for pictures, look here: http://tinyurl.com/AB-oilsnds).

Even if you base your assessment only on the promotional videos of the Canadian Association of Petroleum Producers (www.capp.ca/canadaindustry/oilsands/oil-sands-videos), the feeling of apocalypse hardly escapes you.

So, what is the problem?

First of all the entire destroyed area is really very large. It is unique even in the mining industry that the open cast mine itself covers 5-15 km^2 and the adjacent destroyed lands 30-40 km^2.

Secondly, the open cast mine covers the entire wetland landscape starting directly from the Athabasca river bank and spreading through the valley to terraces and the watershed.

Thirdly, we are dealing with the unique situation where a large area of peatland is destroyed without even using the peat. The only parallel would be construction of infrastructure, but even there the peat is often utilized. And the size is definitely less.

There is no chance to restore the original peatland ecosystems because of the complicated hydrology of the landscape shaped by thousands of years of sedimentation processes. We are not just looking at a few raised bogs here, but at a mosaic of bogs and fens and shallow forested peatlands.

And finally, the scale of impact of hundreds of square kilometres of bare mineral soil particularly on meso-hydrological processes has not been evaluated and is not understood. The new landscape replaces the complicated mosaic of deep and shallow peatlands, streams, mineral upland forests etc. The water flow from watershed to river is severely interrupted in a stretch of 60-90 km along both sides of the Athabasca River.

All these problems come combined with a complicated Canadian legislation, with a land use decision making tool that depends on plenty of conditions hardly connected to environmental conditions and consequences. Project cycle design, regulations and conservation should specifically also address peatlands.

The lakes that are created by open cast mining are not restoration objects. These lakes are mainly created to store water in order to reuse it in the extraction process. But why must these toxic ponds be situated so close to the river? At present the water quality will not allow terrestrialisation by peat formation.

Currently, the 'restoration' practice for open cast mining areas entails filling up with left-over sand, levelling and planting trees – a far cry from the natural mosaic of peatlands, paludified lands and dry forest lands.

The 'restoration' practice for 'in situ' mining areas is afforestation which of course does not include closing ditches as that contradicts the forester mentality.

The Canadian compensation practice in this case focuses on wetlands and does not include peatland as a separate compensation object. It allows

compensation of one type of water object by any other type. A lost creek can be compensated by an artificial lake. One company created a lake to 'replace' a peatland with 8 m peat depth. Non-recognition of peatlands as valuable ecosystems is of course a general problem worldwide.
Peat use is not an issue for the oil companies. Some of the peat is stored for use as surface soil in restoration projects, but it is unclear how much is treated as waste. It is thus impossible to calculate the peat turnover and carbon balance.
The integrated climate effect of oil sands should besides the direct emissions from combustion, include emissions from land use. The emissions caused by deforestation are reported by Canada under the Kyoto protocol, but the loss of soil organic carbon (peat) is not included in this conversion from 'forest land to other land'. Also emissions from the drained peatlands for in-situ operations and tailing ponds in open mining should be included.

Oil sands production is economically feasible only if the oil price is above 70 USD. If oil and gas remain the main energy source the importance of the Canadian oil sands will only increase. The area of the deposits is huge and so is the potential area of impact on the boreal peatland-forest landscape.
Companies are spending large sums of money on mitigation and restoration measures. The question remains whether appropriate knowledge exists with the responsible scientists. Comprehensive understanding of ecosystem functions and services is needed where in contrast the restoration objects are usually as small as the budget and the outcome often dictated by economic interests or by the oil companies themselves hiring the scientists.
Mitigation, restoration and compensation practices can certainly be improved. The first step should be to develop a national plan for oil sand mining, focussing not only on energy interests, but addressing wider demands of climate, biodiversity and landscape integrity.

International peatland course in Latvia and Finland

by Mara Pakalne, Raimo Heikkilä and Ab Grootjans

From 15-25 July 2009, an International peatland training course was organised in Latvia and Finland. In the training course 25 young mire scientists/students and researchers from NGOs and other institutions took part, representing Finland, Latvia, Estonia, Belarus, The Netherlands and Poland. The peatland researchers that had organised the course were practically all members of the IMCG. The invited experts had extensive and long lasting experience in peatland protection and peatland research. Many of them have been involved in international projects on mire restoration. By 'learning on the spot' the landscape-ecological relationships between the hydrological functioning of the peatlands and the occurrence of endangered plant and animal species were investigated.
The course was run under the guidance of 9 teachers from 7 institutions and 4 counties - Dr. Mara Pakalne (Latvia), Dr. Raimo Heikkilä (Finland), Dr. Tapio Lindholm (Finland), Dr. Tapani Sallantaus (Finland), Prof. Harri Vasander (Finland), Ilze Reriha (Latvia), Prof. Ab Grootjans (The Netherlands), Prof. Leslaw Wolejko (Poland) and Gert-Jan van Duinen (The Netherlands).

The Peatland course dealt with:
- quick scan eco-hydrological analyses to assess important hydrological relationships on the landscape-scale (where does the groundwater come from, which are the causes of water loss)
- study of climate influence (temperature and precipitation) on hydrological and geochemical processes in bogs and calcareous fens (what will happen in a changing climate?)
- technical aspects of mire restoration.

Ab explains

The training course started with a series of lectures by peatland experts in hydrology, vegetation, geology and peatland restoration that were followed by practical research activities.
During the course field studies were carried out in the Slitere National Park, Gauja National park, Cena Mire Nature Reserve, Engure Lake Ramsar site, Kalkupe River Nature Reserve and Rauna Staburags Nature Reserve in Latvia and in Suurisuo, Alajoki, Ylinen Savijärvi and Taipaleensuo Mires in Finland. The sites consist of various mire complexes with gradients between groundwater and rainwater fed mires and with well developed spring mires with chalk deposition.
Most of the field work in Latvia was carried out in the Slitere National Park and Kalkupe River Nature Reserve where from 16-18 July spring and inter-dune mires were studied. We studied eco-hydrological processes by measuring temperature profiles and

electrical conductivity of groundwater in two long transects in an inter-dune mire complex close to the coast of the Baltic Sea. This inter-dune mire complex in the Slitere National Park includes various mire types – bogs, fens and transitional mire vegetation and is a unique landscape complex not only in Latvia but also in Europe.

On the way to Finland we visited various spring mires near Amata River in the Gauja National Park and Rauna Staburags Nature Reserve. Many rare and protected species were found in the Latvian study sites, including *Liparis loeselii, Hammarbya paludosa, Dactylorhiza maculata, Nymphaea candida* and *N. alba.*

In the field

From 20–25 July the peatland course continued in Finland. Studies were carried out in 2 sites, Suurisuo and Taipaleensuo Mires. The students studied the site hydrology, geology and vegetation. Short visits were made in Alajoki and Ylinen Savijärvi rich fens to study the natural succession of rich fens after the cessation of hay-making and cattle grazing.

In Suurisuo Mire (about 200 hectares of bogs, fens, spring mires and spruce mires), an extensive study was made during 3 days. Two transects were studied, taking peat profiles, mire water temperatures and electric conductivity and vegetation relevés.

An internationally very rare and protected bryophyte species, *Meesia longiseta,* was found in Ylinen Savijärvi rich fen, which is a young mire, paludified as a consequence of lake water level lowering about 200 years ago to obtain hay meadows. The locality was not known earlier, and the population is probably the biggest in the southern half of Finland, altogether about 2 sq. metres.

There was interest from journalists as well with a National TV broadcast (2 minutes, repeated in December during prime time, look here: http://areena.yle.fi/video/322033) and National Radio (8 minutes, listen here: http://areena.yle.fi/audio/321635) as well as 3 extensive newspaper articles.

The peatland course enabled sharing of the Finnish, Latvian, Estonian, Dutch and Polish experience on peatland studies, conservation and restoration issues. Specialised knowledge on damaged peatlands from The Netherlands and Poland was brought together with experiences on conservation of large slightly disturbed mire gradients in Latvia, Estonia, Belarus and Finland.

Regional News

News from South Africa

February is a busy month for the IMCG in southern Africa. We hosted a special peatlands and mire session at the 'Flood Pulse Symposium' in the Okavango Delta, Botswana from 31 Jan to 5 Feb 2010. The Okavango is the world's largest inland delta and a very appropriate setting for this symposium as it the annual flood waters from the highlands of Angola which is one of the primary drivers of this wetland rich and diverse system. Peatlands and natural peat fires are one of the other dynamic components of the Okavango.

Two sessions were allocated to the 'Peatlands and Mire' session. The 1st session focused on global topics including peatlands and climate change with contributions from Finland, Kenya and the Working for Wetlands Programme in South Africa. The second session focused on the mires and peat swamp forests of Maputaland, South Africa. Read more on the symposium at http://www.orc.ub.bw/floodpulse/. The IMCG will hosts its own peatland focused field trip into the pan handle section of the Okavango from 5 – 9 February 2010.

Special lectures by Hans Joosten and Ab Grootjans will be given as part of a series of World Wetlands Day lectures on 10 Feb 2010 at the Institute of Soil Climate and Water on Pretoria, South Africa. Other IMCG members, Althea Grundling and Eric Munzhedzi (South Africa) and Peter Njuru (Kenya) will also contribute.

February is also a month in which the IMCG can acknowledge that we have succeeded in building capacity to a level where peatland knowledge is not the responsibility of one single person. During this year's preparations for WWD celebrations in South Africa, the IMCG Main Board's Africa members were

approached to give specialist talks at various events. Since most of us would be in Botswana during the time a bit of panic set in amongst organisers. This was promptly dealt with by pushing forward other IMCG members available within organisations hosting events. Needless to say organisers were both relieved and pleasantly surprised when they realised they have the in house capacity!

South Africa's national wetland day celebration will focus on the role of wetlands in climate change with a specific emphasis on the rewetting of degraded peatlands. It is being hosted in Pretoria at the South African National Biodiversity Institute. The Deputy Minister of Water and Environmental Affairs, Rejoice Mabudafhasi, will give a keynote address on wetlands, biodiversity and climate change focusing on the role and commitment of the government to wetland protection in relation to climate change. In the afternoon the Rietvlei Nature Reserve peatlands rehabilitation project will be explored as a demonstration of the rehabilitation process of a previously heavily degraded peatland due to bad land use, and how this protection will positively impact on efforts to mitigate climate change.

Piet-Louis Grundling
peatland@mweb.co.za

News from Argentina: New Ramsar site Valle de Andorra

From September 16, 2009 there is a new protected area in the Argentinean Province of Tierra del Fuego, since part of the Andorra Valley was declared as a RAMSAR site, named "Glaciar Vinciguerra y Turberas asociadas" (Vinciguerra Glacier and linked mires).

The site, which is the southernmost RAMSAR site in the world, presents as a special feature, the inclusion of both, glaciers and mires wetlands types, as well as several additional kinds of water reservoirs. Its location, at 54º 45' S, 68º 20' W is close to Ushuaia city, and adjacent to the Tierra del Fuego National Park. It constitutes in consequence a very appropriate buffer area which extends 2760 ha and includes an amazing patterned mire system located in the bottom valley, slopping mires on the hills, Sphagnum mires and fens in the upper tributary valleys, native Nothofagus forest, alpine vegetation over the tree-line, and peri-glacial and glacial areas with seasonal snow, permafrost, lagoons and the main glacier of that Province. All these wetlands will be protected by the Provincial Government in agreement with the Ushuaia Municipality.

The area is object of glaciological, ecological and hydrological studies which improve the necessary knowledge for water management and polices for land use, leaded mainly to the tourism based on nature. The whole basin has strategic importance because the main river is the major water source for the water supply of Ushuaia city.

The necessary studies and the compilation of the Information Sheet required by RAMSAR were made by the Provincial Water Agency (Dirección General de Recursos Hídricos) with the support of the National Environment Secretary.

The RAMSAR Secretary General, Anada Tiega, accompanied by the Gubernator of the Province of Tierra del Fuego and other authorities, visited the site in October 17, 2009. During his stay he emphasized the values and importance of the site and highlighted the collaborative effort of different institutions at the National, Provincial and Municipal levels.

This RAMSAR site declaration is one of the results from the mires conservation and wise use police leaded by the local water agency and a consequence of the IMCG Field Simposium Tierra del Fuego 2005. In that occasion, IMCG presented to the local authorities the Ushuaia Statement, which emphasized the recommendation to ensure the natural status and the high values of the Valle de Andorra Mires, by applying immediate actions on this way.

Related links:

RAMSAR Information Sheet for the site:

http://www.ambiente.gov.ar/archivos/web/GTRA/file/FIR%20Vinciguerra-Andorra%20oct-09(1).pdf

Good pictures from the site:

http://www.ramsar.org/cda/ramsar/display/main/main.jsp?zn=ramsar&cp=1-26-45-84^24167_4000_0

More information is able to be requested to the authors of this article.

Rodolfo Iturraspe & Adriana Urciuolo
Dirección General de Recursos Hídricos
de Tierra del Fuego.
iturraspe@tdfuego.com; urciuolo@tdfuego.com

News from Georgia: In memoriam: Revaz Gagnidze

Revaz Gagnidze was an outstanding botanist who wrote 13 volumes of the Georgian flora. He defined the phyto-geographic region of Colchis. Revaz Gagnidze had no children but he is the father of a number of botanists.

Revaz could not join IMCG during last year's field trip, but did give a presentation at the Symposium titled "Holocene history of the vegetation of the high-mountain regions of Georgia". He became very enthusiastic about peatlands and, drawing from his immense experience, immediately started a list of significant peatlands of the Caucasus highlands, made plan for their study, but as the saying goes: "Man supposes, God disposes".

List of significant high-mountain mires of Georgia

The high-mountain mires of Georgia are located between 1700-2200 m a.s.l. and are not particularly large (normally only a few hectares). These mires do represent values that are worth of being studied and protected. They contain important palaeoecological information on vegetation succession, shifting vegetation zones and climate change during the Lateglacial and Holocene. The most important mires include:

West Georgia Enguri River Basin, Svaneti

1. Shavlura, Nenska, 2050 m.a.s.l.
2. Lashkhashi, Nenska 2000 m.a.s.l.
3. Gvaldizi, Mulkhra River, 1900 m.a.s.l.
4. Mestia-Chala, 1500 m.a.s.l.

Racha Mountain Ridge, Rioni River Basin

5. Cheliagele, 1100 m.a.s.l
6. Tbata, 1800 m.a.s.l
7. Soseva, 1100 m.a.s.l

Arsiani Mountain Ridge, Adjaristskali River Basin

8. Didajara Mountain pasture, 1850 m.a.s.l

South Georgia Trialeti Mountain Ridge, Dabadzveli Plateau

9. Gomnis –tba, 1850 m.a.s.l
10. Kakhisis didi chaobi, 11780 m.a.s.l
11. Tseros tbis chaobi, 1920 m.a.s.l
12. Sakochavis-tba, 1600 m.a.s.l
13. Bakuriani, 1700 m.a.s.l
14. Ktsiis Zeda Vake, 2090 m.a,s.l
15. Nariani, 2050 m.a,s.l
16. Zresi lake, , 1700 m.a,s.l
17. Sulda a. Kartsakhi, 1800 m.a,s.l

South Georgia, Tsalka Plateau

18. Bareti Lake, 1600 m.a.s.l
19. Lake Jmaris-tba, 1600 m.a.s.l

IMCG investigating high-mountain mires in Chirukhi (September 2009).

Rezo Goradze

News from Spain: Peatland fire doused

Heavy rains have flooded over 1200 hectares of the wetlands of the Tablas de Daimiel National Park. The rains also put out an underground peat fire which had raged at the wetlands.

At the start of the year the government began diverting water from the Tagus River some 150 kilometres away to the wetlands through an underground pipe but the heavy rains meant far less water needed to be tranfered than had been expected.

The Tablas de Daimiel National Park began drying up in the 1960s when the water was first drained from the area so the land could be used for agriculture and to irrigate crops. An exceptionally dry summer worsened the situation and caused the peat to catch fire.

The Tablas de Daimiel National Park was placed on the UNESCO list of Biosphere Reserves in 1980. Last year UNESCO warned Spain that it had three years to restore the wetlands or it would be withdrawn from the list. The European Commission had also urged Madrid to act.

Source: AFP

News from Indonesia: Government study recommends to stop conversion of peatlands

A study by the Indonesian government has recommended a moratorium on peatland conversion if the country wants to meet its pledged emission cuts to tackle climate change. The study commissioned by the National Development Planning Agency (Bappenas) also proposes a land-swap scheme to relocate existing licenses in the peatlands, but not in other degraded forests.

The study suggests that peatlands contributed ~1 Gt CO_2 emissions per year, or half of the country's total emissions. Under a business-as-usual scenario, the study predicted emissions from peatlands would contribute almost 1.4 Gt by 2025. Therewith utilization of the peatlands contributes less than 1 percent of GDP, yet accounts for almost 50 percent of emissions. Indonesia has pledged to abate the country's emissions by 26 percent by 2020.

Source: Jakarta Post

New and recent Journals/Newsletters/Books/Reports/Websites

Correction

In the previous IMCG Newsletter we mentioned the wrong authors for the book below, correction follows

Grosvernier Ph. und Staubli P. (eds.) 2009. Regeneration von Hochmooren. Grundlagen und technische Massnahmen. Umwelt-Vollzug Nr. 0918. Bundesamt für Umwelt, Bern. 96 p.

Guide describing the basic knowledge required to plan the restoration of raised bogs. With detailed descriptions how to execute revegetation and rewetting measures. With many explanatory illustrations. Addressed to conservation authorities and site managers.

Available in German and French free of charge as PDF download here: http://tinyurl.com/RegBog

Rawlins, A.E. 2008. The socio-economic aspects of peatland management: An Ecosystems Approach. PhD thesis, Cranfield University, 344p.

Study on the socio-economic dimensions of lowland peatlands in Northern Europe. Focussing on Somerset and the Fens in England. Explores goods and services from peatlands, linked to stakeholder interests and influences.

Livelihood provisions, maintenance of wildlife interest and floodwater storage were found to be the most important peatland services to stakeholders. The high livelihood associated with consumptive use of peatlands, along with the high degree of private land ownership and the continued relative freedom this affords were found to be the two largest barriers to wise use of peatlands.

The findings suggest that new policy mechanisms may be required to designate property rights to secure particular ecosystem services for the public good. This might involve new institutional arrangements, possibly involving multi dimensional entitlement systems, to secure the future of peatlands. Downloadable under: http://tinyurl.com/Rawlins2008

Woestenburg, M. 2009. Waarheen met het Veen. Kennis voor keuzes in het westelijk veenweidegebied. Landwerk, Wageningen, 120 p. With CD.

Report on the future of the typical peatland meadow area of the western Netherlands, where subsidence (1 cm per year) leads to increasing pumping costs and salt water intrusion ("a landscape with an expiration date"). Addresses the question: continuing drainage or conserving the peat soil. Aimed at developing an integral vision on the management of this area taking into account water management, soil, land use and climate. With various scenarios and strategies, including rewetting (also for commercial climate benefits) and the installment of "underwater drains" that lower the water level in winter but raise it in summer.

Grondboor & Hamer 2009, Nr 3-4: p 53 – 116. Veenspecial.

Peatland special of the journal of the Dutch Geological Society with articles on peatland development, erosion and compaction, peat soil mapping, peat-lignite-coal, the origin of Hoogeveen, a city in NE Netherlands, named after raised bog (hoogveen), geological values of the Ronde Venen, medieval peatland agriculture, archaeological findings from peatlands, salt production from peat, and wood conservation in peat.

Fuke, Yi (ed.). Wetland Wild Vascular Plants in Northeastern China. 2 vols. 2009. 698 b/w figs. col. photogr. 1268 p. gr8vo. Paper bd. - In Chinese, with Latin nomenclature and species index.

This 2-Volume set deals with 706 species belonging to 78 families and 257 genera of wild vascular plants. For each species the family, genus and specie names, place of origin, morphological characteristics and the geographical distribution is described. The Appendix includes a list of all wetland plants in Northeastern China.

Tittensor, Ruth 2009. From Peat Bog to Conifer Forest. An oral history of Whitelee, its community and landscape. Packard, Chichester, 237 p.

By 1900, only 5% of Scotland was tree-covered. However, during the 20th century, large scale planting of coniferous trees significantly enlarged the area of woodland, often driven by the Forestry Commission at the government's behest to supply home-grown timber. This book focuses on the associated social, agricultural and ecological changes to the Whitelee Plateau, where Ayrshire, Lanarkshire and Renfrewshire meet. It contains an in depth oral history, presenting the experiences of the community which lived and worked there and of the officials whose job it was to buy the moorland and convert it to forest. They describe how their lives were changed when they became involved in the project and as the Forest developed. Currently parts of the area are the subject of a controversial proposal for installing wind turbines to generate electricity.

Business Strategy. UK Peatland Programme 2009 – 2012

The IUCN UK Peatland Programme was established in 2009 to promote peatland restoration in the UK. A three year programme of work has been developed to provide a 'conservation quartet' consisting of partnerships, strong science, sound policy and effective practice. An overarching theme for this work is the promotion of the multiple benefits of peatlands to society.

Read the Programme Strategy to find out more: http://tinyurl.com/UKPeatP.

Crushell, P.H.. 2008. Soak systems of an Irish raised bog : a multidisiciplinary study of their origin, ecology, conservation and restoration. PhD thesis Wageningen, 200 p.
Describes the changes that have occurred in the Clara Bog (Co Offaly, Ireland) landscape since pre-history to the present day. Assesses changes in vegetation communities of soak systems on Clara Bog. Investigates the biogeochemistry of soak systems with a view to understanding their origin and development. Includes a restoration experiment to assess future management options for soak systems and an inventory of macro-invertebrates. For more information: Patrick@crushell.com

Novikov, S.M. (ed.) 2009. Hidrologija zabolotsennych territorij zony mnogoletnej merzloty Zapadnoj Sibiri. BBM, Sankt-Peterburg, 536 p.
Impressive hardback monograph presenting the results of the long-term field studies of the structure and hydrological properties of the peatland systems in the West-Siberian permafrost zone as carried out by the State Hydrological Institute over the period 1973 – 1992. Dedicated to Konstantin Evgenevich Ivanov (one of the founders of Russian peatland hydrology) and the 90th anniversary of the Russian State Hydrological Institute.
With detailed descriptions of peatland and peatland microtope types on the basis of geobotanical research and remote sensing, of the structure of peat deposits and the hydrophysical properties of their active layer, the thermal properties of the peat, the radiation balance of the peatland surface and peatland evaporation.
With much attention to mathematical modelling of the heat regime of palsa mires and the calculation of the run-off of small and medium-scale rivers and detailed analyses of hydrology, hydrochemistry and human impact of/on endotelmic lakes. Abundant graphs, tables and figures, including 24 colour pictures.
Major disadvantages: written in Russian and only 200 copies printed …

Gelbrecht, J., Zak, D. & Augustin, J. (eds.) 2008. Phosphor- und Kohlenstoff-Dynamik und Vegetationsentwicklung in wieder-vernässten Mooren des Peenetals in Mecklenburg-Vorpommern – Status, Steuergrößen und Handlungsmöglichkeiten. Berichte des IGB Heft 26, Berlin, 190 p.
Compilation of results of long-year research studies (since 2003) into the phosphorous, carbon and greenhouse gas dynamics and vegetation development of rewetted fen peatlands in the Northeast of Germany.

Rotherham, I.A. 2009. Peat and peat cutting. Shire Publications, Oxford, 64 p.
Nice small booklet with many surprising old pictures on peat cutting in the UK and Ireland.

The Peatland Biodiversity Management Toolbox. Draft for review
In February 2003, 10 member countries of the Association of South East Asian Nations (ASEAN) endorsed the ASEAN Peatland Management Initiative (APMI) to act as a framework for collaborative activities to address peatland degradation and fires. Subsequently in November 2006, the ASEAN Ministerial Meeting on the Environment endorsed the ASEAN Peatland Management Strategy 2006-2020 (APMS) to guide the sustainable management of peatlands in the region.
The goal of the strategy is to promote sustainable management of peatlands in the ASEAN region through collective action and enhanced cooperation to support and sustain local livelihoods, reduce the risk of fire and associated haze and contribute to global environmental management. The strategy includes 25 operational objectives and 97 action points in 13 focal areas ranging from integrated management to climate change and peatland inventory. Countries in the region are currently in the process of developing and implementing their respective National Action Plans.
Guidelines have been prepared under the project on Conservation of Peatland Biodiversity in South East Asia. The guidelines aim to advance biodiversity conservation issues within the framework of the APMS by expanding on some of the priority issues identified within the APMS, providing guidance to technical professionals and administrators on approaches and techniques for improved conservation and restoration of peatlands, as well as sustainable development practices and options including reducing the risks and impacts of land-uses in peatland areas.
Currently a draft of the guidelines is open for comments. The document can be found here:
The document has been uploaded and an announcement page made at: http://tinyurl.com/PBioManT
Please email your comments and feedback by 28 February 2010 to serena@gec.org.my.

IMCG Main Board

UPCOMING EVENTS

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

Reclamation and Restoration of Boreal Peatland and Forest Ecosystems: Toward a Sustainable Future
25-27 March 2010, Edmonton, Alberta, Canada
For more information:
www.peatnet.siu.edu/form_edmonton/index.html

IMCG Field Excursion and symposium
5-17 July 2010, Slovakia and Poland
For more information:
http://www.imcg.net/10/imcg_symposium_2010.htm

7th SER European Conference on Ecological Restoration
23 - 27 August 2010, Avignon, France
Ecological Restoration and Sustainable Development - Establishing Links across Frontiers
For more information: www.seravignon2010.org

Responsible Peatland Management and Growing Media Production
13-17 June 2011, Québec, Canada
For more information:
http://www.peatlands2011.ulaval.ca

IMCG Main Board members in Botswana: left to right: Eric, Hans, Ab, Piet-Louis