INTERNATIONAL MIRE CONSERVATION GROUP

NEWSLETTER

issue 2010/3-4, December 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 (Piet-Louis Grundling), a Secretary General (Hans Joosten), a Treasurer (Francis Müller), and 2 additional members (Ab Grootjans, Rodolfo Iturraspe).

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

Editorial

This Newsletter comes to you with severe delay for which we apologize. One way or another, the interest in peatlands is worldwide rapidly increasing which requires more and more attention of the secretariat. We have now taken steps that should improve the situation by sharing the workload among more people.

The IMCG Field Symposium 2010 in Slovakia and Poland was a big success. This Newsletter contains the outcomes of the associated General Assembly, including minutes and a series of resolutions. The field symposium organizers are currently preparing an updated version of the excursion guide that we will soon publish as a separate volume. Also the proceedings of the Finland congress are almost ready and will become available any moment now.

This Newsletter contains furthermore the reports of the important meetings of the Biodiversity Convention and the Climate Convention in the final months of 2010. The Climate Convention has proceeded so far that there is unanimity among negotiators that rewetting of peatlands should become a new activity under the Kyoto Protocol. Such concrete results have not been reached yet by the Biodiversity Convention, but also there the awareness of peatlands is increasing thanks to the input of IMCG members.

The Newsletter also reports on other 'positive' developments with respect to peatland conservation. But whereas such 'progress' mostly consist of avoiding negative developments, also real negative developments are taking place, such as in Georgia.

The General Assembly noticed that the financial situation of IMCG is worsening. We therefore want to remind all of you who can afford it that (tax deducible) donations are very welcome. The funds are mainly used to support travel, especially to involve members from countries with currency problems and young people that do not have possibility to rise own funds. The IMCG bank account number can be found at the bottom of this page and our treasurer is always willing to support: francis.muller@pole-tourbieres.org. Our next Newsletter we plan to bring out at the end of April, so send your material in before April 24.

For further information, address changes or other things, contact us at the IMCG Secretariat.

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A note from the Chair

I would like to extend, on behalf of all IMCG members, our sincere thanks to the previous Chair, Jenny Whinam, for the excellent job she has done since 2004. It was period in which the landscape in mire conservation changed dramatically. Additionally changes took place within the IMCG. Jenny steered us through a period when peatlands were under severe threat from the fuel industry. It was also a period when our reaction to global climate change either created opportunities for mire conservation or resulted in the loss of mires on a global scale. However, perhaps more important to us as friends and colleagues is the fact that she was able guide the continued internationalisation of the IMCG in such a way that we maintained our strong base of European experts and supporters. It will be a challenge for me to carry out the duties of this position and maintain the same impressive standard as Jenny and others. However, with such passionate members, a competent Secretariat based in Greifswald, and with Hans Joosten, the General, to support, who can have any doubt that this will be possible?

My aim as the new Chair of IMCG will not differ much from that of my predecessors. We need to continue our efforts to liaise with our partners in conservation opposing the exploitation of mires, and to promote wise peatland use. We need to act on the opportunities afforded to us in rehabilitating peatlands as part of the efforts to reduce the impacts of climate change. Expanding our network internationally is similarly important, especially through identification of key players and by training and building up expertise in developing countries. I can't emphasise enough the importance in raising awareness and training of people at a broader base. Only by empowering others by imparting our knowledge and skills can we expect them to accept and carry out our message of mire conservation.

My sincere gratitude goes to my friends in the IMCG who have invited me in 2000 to join them in Quebec. Since then I have not turned back. Jan Sliva and Hans Joosten took a keen interest in Southern Africa and the IMPESA programme was born (mapping peatlands in Southern Africa and training people on mires). Hans Esselink, Ab Grootjans and others soon joined in. The 11th Biennual General Assembly meeting took place in South Africa and Lesotho in 2004. Membership from Africa continues to grow and early this year the IMCG hosted a mire and peat session at the Flood Pulse conference in Botswana, followed by a field excursion into the Okavango, a short visit to the Caprivi in Namibia and a mire or two in the north-western part of South Africa.

In short, the IMCG's involvement in Southern Africa is making a difference and I want to encourage you as individual members of our great organisation to expand your interest to areas beyond your own. Step out and make a difference in other parts of the world.

I appreciate your support.

Piet-Louis Grundling

REGISTER

Please fill out the IMCG membership registration form.

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

Minutes of the IMCG General Assembly

17 July 2010, Goniadz, Poland

Present: Angéline Bedolla, Vicky Bérubé, Olivia Bragg, Bev Clarkson, Hervé Cubizolle, Fabrice Darinot, Berit Forbord Moen, M. Isabel Fraga, Eduardo Garcia-Rodeja, Ema Gojdičová, Ulrich Graf, Ab Grootjans, Althea Grundling, Piet-Louis Grundling, Andreas Grünig, Raimo Heikkilä, Bettina Holsten, Hans Joosten, Annemieke Kooijman, Wiktor Kotowski, Tapio Lindholm, Alice Michaud, Tatiana Minayeva, Asbjørn Moen, Francis Muller, Eric Munzhedzi, Mara Pakalne, Pavel Pawlkovski, Zuzana Plesková, Sake van der Schaaf, Veronika Schenková, Rohani Shahrudin, Alma Szafnagel-Wołejko, Michael Trepel, Lesław Wołejko

1. Opening and Welcome
Greetings from our absent chair Jennie. Piet-Louis opened the assembly and thanked the Slovakian and Polish organisation teams. Leslaw recalled all people who have cooperated and expressed special thanks to Pavel, Łukasz and Wiktor and their allies, and to Alma for mental support of Leslaw.

2. Minutes of the General Assembly of 22 July 2006 in Tammela, Finland (available in IMCG Newsletter 2006/3): Accepted

3. Biennial report (2006 – 2010) on the state of affairs in the IMCG and on its policy including an evaluation of the Action Plan 2006 – 2010 (see Newsletter 2010/2). The report was shortly discussed and accepted.
The secretariat asked the IMCG members to inform the secretariat on their involvement in large peatland relevant projects so that an effective exchange of information can take place.

4. Balance sheet and the statement of profit and loss. *Francis* presented the current financial situation. IMCG has currently 9200 euro on its bank account. In the past years we have reduced our reserves and it is necessary to raise new funds, e.g. by stimulating members to make a donation to IMCG.

5. IMCG Action Plan 2010 – 2014:
Hans introduced the background of earlier action plans (2002-2006, 2006-2010). The IMCG network is a significant force in the international conservation policy arena in spite of being a purely voluntary led organisation. As such IMCG considerably 'punches above its weight'.
In the AP 2006-2010 we had decided to focus on the following main issues: 1) to improve strategic ambition on what to achieve, 2) to correct the geographical bias of IMCG, 3) to use the capacity of the IMCG network better, and 4) to generate more unrestricted funds.
With respect to the strategic ambition, there has certainly been progress with our designed work in international conventions and bodies. Other organisations increasingly adopt 'IMCG' issues. Whereas the Cinderella syndrome still exists, we get now a new problem that the 'Ghost is out of the bottle', i.e. that others increasingly deal with peatland conservation issues, often without sufficient knowledge of the subject. Here a clear task for IMCG exists.
The geographical distribution of IMCG has certainly been improved, but needs further attention.
The other two issues remain points of concern. Whereas IMCG members are widely active worldwide and successful examples of collaborative efforts can be observed, we do not yet manage to mobilize the full potential of the network. This should get more consideration.
The latter also applies to the finances of the organisation, especially to enable young people and people from countries with currency problems to participate in IMCG work and activities.
The main tasks for IMCG in the coming years will be related to threats from the increasing demands for energy and land. After the initial interests in peat (for energy) and land (for agriculture and forestry), the last decades had raised the attention for peatland regulation (for climate, water regulation, coastal protection) and informational functions (including species and ecosystem biodiversity). Peatlands now again are subject to severe competition for energy and land. We observe plans for increased use of peat for energy in e.g. Finland, Sweden, Russia, Ontario, increased use of peatland for oil/gas infrastructure, of peatland for wind energy, hydro-electricity, cultivation of 'biofuels', and in general land for livelihoods for the still rapidly growing world population. These developments will lead to new challenges for peatland conservation that will require new approaches (stronger focus on ecosystem services, restoration, paludicultures) and increased international orientation and cooperation.

6. IMCG Membership fee: The proposal of the Main Board to continue to policy of a zero sum membership fee for the next two years was accepted.

7. Election of the Main Board: the new Main Board was welcomed by acclamation

8. Conference resolutions
The draft resolutions were projected, read out, discussed and adopted in outline and content. The secretariat will edit the drafts and consult the final drafts with the respective drafting groups.

9. Next venues: for 2012 we will investigate the option of having the Field symposium, Congress and General Assembly in South America (Andes) keeping in mind accessibility for the General Assembly.

10. Honorary Life Members. Michael Succow, Lebrecht Jeschke and Fred Ellery were nominated by the Main Board. *Piet-Louis*, *Ab* and *Hans* presented short overviews of the achievements of the candidates. The General Assembly granted by acclamation all three candidates the status of honorary member.

11. Any Other Business: call for donations by the treasurer.

Leslaw closed the meeting

IMCG Resolution for Finland

The International Mire Conservation Group (IMCG) is a worldwide organisation of mire (peatland) specialists with a particular interest in peatland conservation. The IMCG held its 13th biennial General Assembly in Goniadz, Poland on 17 July 2010, attended by members from 19 countries and 5 continents. At that Assembly the following resolution for Finland was adopted.

At its 2006 General Assembly in Finland, IMCG expressed its concern about the state of Finnish mires. IMCG noted that the coastal land uplift mire succession series north of Oulu are of international importance and encouraged Finland to make sure that the last series will remain intact. As their protection is not yet secured, we repeat this urgent request.
With respect to peat extraction policy, IMCG urged Finland to rapidly develop and implement an energy strategy that includes:

- phasing-out of fuel peat mining by the year 2025
- no further peat mining in areas with high conservation value
- an immediate end to peat mining in those areas that can easily be restored, that are important for protecting high conservation value areas, and that provide key ecological services
- restricting remaining peat mining activities to deposits that lost their ecological values before 1990.

Unfortunately it seems that since 2006 little progress (if any) with respect to the sustainability of peatland utilization has been made. We urge that the current Working Group for Mire Strategy for Finland takes the development of sustainability seriously. This includes:

- No undrained mires shall be opened for peat mining any more, independent of ownership. Fuel peat mining must cease as soon as current peat mining areas have been used up. State support to peat mining in the form of feeding tariffs and tax exemptions must end. Peat energy must be subject to an adequate tax, similar to coal.
- Reclamation of mires for agriculture shall only be allowed with environmental permit and under strict limitations to prevent negative impact with respect to greenhouse gas balance, water quality and biodiversity. There is no real need for additional agricultural area, but new fields are taken into use due to agricultural supports and as places where to deposit manure of cattle and pigs.
- State support for peatland forestry must end and clearing of ditches in peatland forestry must be strictly limited. Recent research shows that forestry drainage produces large emissions of greenhouse gases to the atmosphere, whereas ditching also causes leaching of humic substances to the watercourses.
- According to the Finnish forest industry, some 2 million hectares of drained peatland has not produced the expected result in timber growth. These areas must be restored to stop greenhouse gas emissions from those areas. In many cases this will enhance the other ecosystem services of mires.
- The hydrological state of mire reserves must be assessed and in cases with hydrological damage caused by activities outside the reserves, the boundaries of the reserves must be corrected or hydrological buffer zones should be established and the damaged areas restored. The EU habitat directive guidelines must be followed in protecting biodiversity in Natura 2000 areas.
- Threatened mire biotopes must be duly considered when preparing the Mire Strategy for Finland and developing legislation. In the recent assessment of threatened habitats in Finland most mire complex types and habitat types were regarded as threatened. Especially spruce mires, rich fens and springs were regarded as critically endangered or endangered. Destruction of these must be forbidden.

IMCG Resolution for Georgia

The International Mire Conservation Group (IMCG) is a worldwide organisation of mire (peatland) specialists with a particular interest in peatland conservation. The IMCG held its 13th biennial General Assembly in Goniądz, Poland on 17 July 2010, attended by members from 19 countries and 5 continents. At that Assembly the following resolution for Georgia was adopted.

The IMCG General Assembly affirms the Kobuleti Memorandum, adopted by IMCG's 15th International Field Symposium in Armenia and Georgia, held September 1 – September 16, 2009 and stresses the following observations from that Memorandum:

- The mires and peatlands of Georgia and the landscapes in which they are embedded form a unique and irreplaceable part of the Earth's natural heritage.
- These mires and landscapes represent an important economic resource. They provide clean water, flood control and enable a sustainable source of income through ecotourism. Their conservation will facilitate Georgia meeting the goals of the UN Framework Convention on Climate Change.
- The mires and forests of the Kolkheti National Park clearly deserve international recognition and integral protection under the World Heritage Convention.
- IMCG greatly appreciates the efforts in protecting the peatlands of Georgia, especially in the Kolkheti Lowlands. Many mires and peatlands are, however, not yet sufficiently protected. They lack adequate buffer zones to protect them against damage from the outside and they are badly managed. The establishment and operation of the Black Sea Terminal bordering the core zone of the Kolkheti National Park must be considered as a disgrace of global dimensions.

The Memorandum lists a series of requirements for improving the conservation and wise use of the mires and peatlands in Georgia, including

- further inventory of biodiversity and other ecosystem values,
- protection of the most important mires,
- recognition of the international significance of these peatlands,
- prevention of damage to all pristine sites,
- elimination of negative impacts from adjacent areas by the establishment of buffer zones,
- comprehensive Environmental Impact Analysis for all development proposals on and adjacent to peatlands,
- integrated planning and management,
- strategic restoration and rehabilitation of mires and Kolkheti forests,
- elaboration and adoption of legislation to protect high value mire habitats effectively,
- development of organisational infrastructure for the conservation and wise use of peatlands,
- development of the sustainable benefits that peatlands bring to the region and
- development of further programmes for public awareness, education and ecotourism.

The IMCG General Assembly urgently requests the Government of Georgia:

- To ban peat extraction from the Kolkheti peatlands forever. In the past decades, peat extraction from the Kolkheti mires has provided only insignificant economic benefits, but resulted in substantial environmental costs by destroying the hydrologic regime, by damaging valuable wetland habitats and by causing substantial carbon emissions.
- To stop all activities in the protected areas that harm the peatlands e.g. infrastructure construction for economic development
- To develop a strategy against artificial fires caused by hunters, which bring much damage to the peatlands within the protected areas
- To install buffer zones for the Kolkheti National Park and the Kobuleti Nature and Managed Reserve to prevent developments close by from damaging the protected peatlands
- To stop all activities in the protected areas harming the peatlands, e.g. infrastructure constructions for economic development projects
- To install buffer zones for the Kolkheti National Park and the Kobuleti Nature and Managed Reserve as economic developments close by otherwise will have damaging effects to the peatlands in the protected areas
- To develop a strategy against the artificial fires caused by hunters damaging most of the peatlands within the protected areas
- To support biodiversity conservation in Kolkheti by restoring relict Kolkheti forests and *Sphagnum* peatlands as ecologically viable and economically attractive habitats.
- To take immediate action in support of the nomination of the Kolkheti *Sphagnum* Peatlands and Forests as UNESCO World Heritage Site.
- To take special protection measures for the high mountain peatlands of Arsiani.

The International Mire Conservation Group offers the experience and expertise available through its network to enable the Government to meet the objectives mentioned above. We offer this support in recognition of the international importance of the mires of Georgia.

Goniądz, July 17th, 2010

IMCG Resolution for Slovakia

During the period July 4 – July 18, 2010, the International Mire Conservation Group (IMCG) held its 16th International Field Symposium in Slovakia and Poland, as part of IMCG's regular field assessments and symposia.

An IMCG delegation from 19 countries and 5 continents, accompanied and supported by representatives of the State Nature Conservancy and Slovakian and Polish scientists, travelled across Slovakia and Poland, studying the diversity and functionality of peatlands and the issues facing them. As a result, the IMCG experts, recognizing the achievements of the Government of Slovakia in improving land use planning and in developing the network of protected areas, including those of international importance, look forward to the continuation of this policy. We wish to inform the Government, central and regional authorities, and the local self-governance of Slovakia of the following:

- Mires and peatlands have very important functions for regulating local, regional and global climate and hydrology and for sustaining biodiversity. These functions are recognized by international conventions to which Slovakia is a Contracting Party, including the Convention on Wetlands (Ramsar), the Convention on Biodiversity and the UN Framework Convention on Climate Change.
- The IMCG is impressed by the variation in well-developed mires in Slovakia. Slovakia harbours a large variety of mire types and species. The calcareous spring mires, in particular, are among the most important and best preserved mire ecosystems in Europe.
- IMCG greatly appreciates the work that has already gone into characterising and understanding the mires and peatlands of Slovakia. The calcareous spring mires in the High Tatra region clearly deserve international recognition.
- IMCG further acknowledges and greatly appreciates the efforts in protecting the mires in Slovakia as National Nature reserves, or in the framework of the Natura 2000 legislation.
- It is clear, however, that several existing National Nature Reserves, National Parks and Natura 2000 areas are not yet sufficiently protected. We have observed that several legally protected spring mires and fen meadows, such as Abrod and Belianske luky, lack adequate hydrological buffer zones to protect the sensitive ecosystems against damage brought on from the outside. A large section of the local catchment area of Abrod, for instance, is intensively used for grass sod production for foreign football stadiums. Due to these activities Abrod is clearly influenced by eutrophication via both ground- and surface water. This is a clear violation of European and Slovak law.
- The IMCG regrets that in Slovakia no public funds exist that can solve property related problems to secure a sustainable protection of the legally protected Nature reserves. We were, for instance, surprised that the largest travertine hill in Slovakia (Siva Brada) is currently for sale, but no money is available to purchase the land and develop a stable management regime. In most European countries the existence of such a Fund that can solve property related problems, is common practise.

Similarly the fact that a National Park can own forest but no agricultural land (e.g. grasslands) is in international respect exceptional. A similar restriction that hampers adequate management, does not exist in other EU countries and leads to the situation that nature conservation in Slovakia is limited by law. We propose that this apparent gap in legislation is corrected.

The International Mire Conservation Group congratulates the Government of Slovakia and its Ministry of Environment with the steps already taken and offers the experience and expertise available through its network to enable the Government to meet the objectives mentioned above. We offer this support in recognition of the international importance of the mires of Slovakia.

Goniądz, July 17th, 2010

IMCG Resolution for Poland

During the period June 5th –17, 2010, in the 26th year of its existence, the International Mire Conservation Group (IMCG) held its 16th International Field Symposium in Slovakia and Poland, as part of IMCG's regular field assessments and symposia.

An IMCG delegation from 19 countries and 5 continents, accompanied and supported by representatives of nature protection administration of Slovakia and Poland and Slovak and Polish scientists and professionals, travelled across Slovakia and Poland studying the diversity and functionality of peatlands and the issues facing them.

Mires and peatlands have very important functions for regulating local, regional and global climate and hydrology and for sustaining biodiversity. These functions are recognized by international conventions to which Poland is a Contracting Party, including the Convention on Wetlands (Ramsar), the Convention on Biodiversity and the UN Framework Convention on Climate Change. As the member of the European Union Poland has committed itself to safeguard this important part of European natural heritage.

The IMCG experts recognise the achievements of the Government of Poland in identifying and selecting valuable mires for the Natura 2000 legislation and in developing a network of protected areas, including those of international importance, such as the Biebrza and Rospuda mires. The IMCG looks forward to the continuation of this policy. We hope that this development will be followed by the local authorities, responsible for creating conditions for succesful implementation of this policy.

We wish to inform the Government, central and regional authorities, and the local self-governance of Poland of the following:

- The IMCG is impressed by the variation in well-developed mires in Poland, as a result of the special biogeographic and climatic conditions. Protected nature areas in Poland still harbour many mire species, and mire types that elsewhere in Europe have become very rare. The mires and peatlands of Poland and the landscapes, in which they are embedded, form a unique and irreplaceable part of the Earth's natural heritage.
- IMCG wishes to compliment and express its gratitude to the Polish Government for acknowledging the unique values of the Rospuda Valley and resolving the conflict with construction of the Via Baltica motorway. The IMCG pleads for extending the highest possible protection status over this site to secure its safe future in functional connection with the surrounding landscape.
- Extensive areas of mires and peatlands in Poland have not yet received the protection they need. Several National Park and Nature Reserves lack adequate buffer zones to protect the sensitive mire ecosystems against damage from outside, such as inflow of nutrients from neighbouring agricultural fields or abstraction of groundwater from groundwater reservoirs that feed the mires. An example of the latter is the unique calcareous mire Torfowisko Sobowice near the city of Chełm, which is threatened by industrial water extraction. Such negative influences are insufficiently controlled by current management that also lacks an adequate system for monitoring hydrology. Conflicts about water must be resolved to the benefit of the vulnerable mires, as feasible alternatives exist to secure adequate water supply to the local community.
- The IMCG invites the Polish government to improve its spatial planning legislation that hitherto does not enable adequate protection of mire ecosystems that require conservation and wise use of the landscapes with which they are functionally connected.

The International Mire Conservation Group congratulates the Government of Poland with the mire protection steps already taken and offers the experience and expertise available through its network to support the Government in filling the conservation gaps mentioned above. We offer this support in recognition of the international importance of the mires of Poland.

Goniądz, July 17th, 2010

Election of IMCG Main Board and Executive Committee

At our General Assembly in Poland we would have had to elect a new Main Board. In order to guarantee an effective democratic election process involving all members, nominations had to be submitted to the Secretariat before May 15th 2010, so that ballots would reach everybody in time.
As there were exactly 15 candidates for 15 Main Board positions, and in accordance with article 9.1 of the constitution, no voting was necessary and all candidates were included in the new Main Board.

Nomination date	Name	Residence
100501	Hans Joosten	Germany
100511	Tatjana Minaeva	Russia
100511	Olivia Bragg	Scotland
100511	Piet-Louis Grundling	South-Africa
100511	Rodolfo Iturraspe	Argentina
100511	Leslaw Wolejko	Poland
100512	Ab Grootjans	Netherlands
100512	Francis Müller	France
100512	Jennie Whinam	Tasmania
100512	Tapio Lindholm	Finland
100512	Line Rochefort	Canada
100512	Faizal Parish	Malaysia
100512	Eduardo García-Rodeja	Spain
100512	Eric Munzhedzi	South Africa
100513	Shengzhong Wang	China

The new IMCG Main Board immediately started the procedure to elect the Executive Committee, incl. the chair. The following candidatures for EC position were received by the secretariat:

Candidates	Position	Piet-Louis	Hans	Francis	Ab	Rodolfo	Olivia
1	Chair						
2	secretary						
3	treasurer						
4	add. member						
5	add. member						
	Available for this position						
	Not available unless no other candidates are available						

Voting took place by ballot (organized by Asbjørn Moen, Trondheim). Every Main Board member could cast one vote for every position.

The results of the elections were as follows:
- 13 of the 15 members of the IMCG Main Board casted their votes before the deadline of September 30, 2010.
- Piet Louis received 12 votes for the position of Chairman and was therewith elected as Chairman.
- Hans received 13 votes for the position as Secretary and was therewith elected as Secretary.
- Francis received 13 votes for the position as Treasurer and was therewith elected as Treasurer.
- Ab received 12 votes, Rodolfo 11 votes, and Olivia 1 vote for the position as additional member. Therewith Ab and Rodolfo were elected as additional members.

The results of the elections reflect the logical options. Piet-Louis was the only candidate for Chairman, Francis the only candidate for Treasurer. With Piet-Louis as Chairman, Hans was the only remaining candidate for Secretary and Ab the only remaining direct candidate for additional member. For the second additional member, a vote had to be made between Rodolfo and Olivia who both had expressed to be only available when no other candidates would stand. The following considerations were exchanged among the Main Board:
- Olivia has already a very busy and well-fulfilled job as Editor-in-Chief of our scientific journal
- With Hans, Francis and Ab, Western-Europe is very well represented in the EC, with Olivia the bias would become even stronger. Rodolfo would enable a better geographical balance.
- With Rodolfo in the EC, the EC would be enabled to stay in a more direct contact with the local organizers of the IMCG Field Symposium, Congress and General Assembly 2012 in South America.

IMCG Main Board meeting 16 July 2010

Present: Leslaw, Francis, Piet-Louis, Eric, Olivia, Hans, Ab, Tapio, Tatiana, Eduardo

The MB meeting prepared the IMCG General Assembly and followed the agenda points of that meeting.

0. Who will chair in absence of Jennie? Proposal: Piet-Louis. Accepted.

1. Opening and Welcome: Piet-Louis will speak some introductory words.

2. Minutes of the General Assembly of 22 July 2006 in Tammela, Finland (available in IMCG Newsletter 2006/3): proposal to accept, the Assembly was 4 years ago.

3. Biennial report (2006 – 2010) on the state of affairs in the IMCG and on its policy including an evaluation of the Action Plan 2006 – 2010 (see Newsletter 2010/2):
Hans will present a ppt, added with some sheets and comments of *Michael* and *Olivia*. *Tatiana* asks to mention the projects in which IMCG was officially involved. In general it would be useful when members inform the secretariat on their involvement in large projects so that an effective exchange of information can take place.

4. Balance sheet and the statement of profit and loss:
Francis will present a ppt and make some remarks on future finances of IMCG. We have currently 9200 euro on the account that has been transferred from the former account. Philippe has not yet transferred the bank extracts of the former account of the last 4 years. The *Secretariat* will send a letter to Philippe (or phone him) to stimulate transfer.
Related to the balance sheet a discussion was started about the finances of the organisation. In the past years we have reduced our reserves and it is necessary to raise new funds, as no organisation can function without money.
We must remind the members that (tax deducible) donations are welcome and put a motivated request in the Newsletter ("Keep us moving"!) and on the Website, including an explanation what we need the money for. The main aim of funds will be to support travel, especially to involve young people that do not have not the possibility to raise own funds. *Francis* will make an information paper for people who want to make a donation.

Ab gave the example of the knowledge network on restoration in the Netherlands, where 10% of the restoration investments go to research. We could bring this further on a European scale. The IMCG membership consists of both researchers and managers. We could try and get money for developing such network as a project for e.g. 5 years. *Eduardo* points at the opportunities that EU has for science. *Francis* proposed to try and find money for concrete projects with concrete tasks adhered to concrete people. He raised the question what projects to develop: a project in which IMCG as an organisation participates, or a project that is implemented by IMCG (members) solely. *Hans* stressed that projects and funding have to be linked to the aims of the organisation. Simply looking for projects to generate money also brings a lot of extra work. *Francis* will prepare an information paper addressed to people who want to involve IMCG into a project and will make a short list of possible projects.

5. IMCG Action Plan 2010 – 2014:
Hans will introduce the main discussion points on aims, format and development. *Leslaw* notes that things dealing with IMCG organisation can be arranged in a rather strict way. External activities, however, cannot be regulated rigorously. This should be reflected in the structure of the action plan. *Tatjana* notes that strict plans with log-frames require money for implementation. With respect to concrete actions we just depend on the capacity of the members. We need a strategic frame to formulate priorities from the global experience, but a very concrete action plan will formulate tasks that we may not be able to implement. *Olivia* notes that some specific actions anyhow have to be followed up, such as the Windmill conference and the European Mires Book. *Piet-Louis* proposes to identify broader objectives, in which people can be involved in many ways and reminds that we need to know what members are doing (i.e. information collected associated with membership applications). It is important that a distinction is made between strategic issues and using opportunities. *Olivia* thought that the framework is already good but that the opportunities still have to be built in.
Francis stressed that indeed action should be guided by strategic priorities.
Leslaw recognized that several "external" international activities are in fact largely implemented by IMCG members, e.g. the exchange with Japan or the Finnish-Latvian workshop. It would be good to include the name of IMCG to such events. The use of the IMCG logo should, however, be approved by the secretariat. *Tatiana* notes that large organisations increasingly take up the peatland issue. We should try and keep grip on the process to prevent mistakes being made.
On the basis of these deliberations, *Hans* will prepare a ppt for discussion in the General Assembly.

6. IMCG Membership fee: The Main Board will propose to the General Assembly to continue to policy of a zero sum membership fee for the next two years.

7. Election of the Main Board: all 15 candidates are accepted. The Main Board will propose the General Assembly to welcome the team by acclamation. The Main Board made a short inventory round to make an inventory of which main Board members are available for which position in the Executive Committee.

8. Conference resolutions: the Main Board divided responsibilities in assisting the various resolutions in preparation.

9. Next venues:
The last Main Board meeting (Georgia) had decided "to explore the perspectives of an Andes meeting in 2012. Rodolfo will take the lead." *Ab* underlines that Rodolfo is a good choice as he has already organized a very good trip in Tierra del Fuego. Various people are interested in organizing the event. Important is that the place to convene the General Assembly will not be extremely difficult to reach for members. *Ab* stresses that S-America is important to increase the current low IMCG membership. For accessibility the General Assembly might maybe better be held in the lowlands.

10. Nomination of Honorary Life Members: The Main Board will propose the General Assembly to adopt Lebrecht Jeschke, Michael Succow and Fred Ellery as Honorary Life Members. Piet-Louis, Ab and Hans will prepare a short explanation for the Assembly.

11. Any Other Business
* Financial facilitation of the editor of Mires & Peat:
Olivia describes the increasing editing workload and the increasing financial demands of Dundee University. She has addressed IPS for further financial support (which was honoured). The increased workload is also attributable to bad manuscripts that need very much effort for improvement. The MB gives in consideration that possibly a sharper selection could be made, that less "service" should be provided, and that higher linguistic quality demands should be made, to prevent that the editor is wrongfully "exploited" by submitting authors. The MB decides to install a committee on journal issues consisting of *Olivia*, *Ab* and *Hans*.
* Members with deviating opinions:
A discussion was held how to deal with members who publicly broadcast opinions that might be considered to be harmful for mire conservation. *Leslaw* notes that members should address such problems according to normal scientific practise: to react with an own article correcting the litigious opinions.
* IMCG membership code:
A discussion was held on whether we need an IMCG membership code. It was noted that IMCG members anyhow have subscribed the IMCG constitution and that a too prescriptive code may jeopardize the pluralism of conservation concepts within IMCG. It would, however, be useful that IMCG members remain informed on large projects in which IMCG members are involved that may have a large political impact. The secretariat will address members and projects in this respect.
* Position towards IPS with special attention to the Strategy for Responsible Peatland Management:
There is a general feeling that the attitude of IPS in the last years has become less constructive. The IPS approach to the peat and climate discussion has destroyed much of the confidence in IPS' sincerity. IMCG spends too much time on IPS issues of which the problem and aim are not clearly defined (such as the strategy) or that IPS does not want to address seriously (such as the peat/climate problem). As one MB member summarized: "IPS is not dealing with problems, they are only dealing with image." In this context it was decided to inform IPS that IMCG applauds the initiatives of IPS to come to practical working rules with respect to peatland management, but will not support them. IMCG considers the Strategy as a document of IPS for IPS (members), not as a document of IMCG. IMCG and its members have invested ample time in commenting the drafts of this document and we see no need to discuss the issue further. *Hans* will accordingly write a letter to IPS and also inform IPS that problems between our organisations should be discussed in our regular meetings.
* Further meetings:
Windmill meeting in Scotland? *Tatiana* noticed that the outcome of the Symposium in Santiago de Compostella should be integrated in existing policies and decision making schemes, also internationally (UNFCCC, Ramsar). If the messages are not formulated, it makes sense to organize a follow-up symposium. *Olivia* will contact Andrew Coupar to discuss whether further action is required, e.g. a symposium in Scotland in 2011. *Hans* proposes to link it to IUCN Peatland Programme and to contact Clifton Bain about it.
With respect to an Arctic symposium it was noted that the Arctic is interesting from a scientific point of view, but that it is unclear what the conservation element should be. Oil and gas exploration/exploitation damage the peat surface that protects the permafrost in regions with discontinuous permafrost, with most problems in Nenetski autonomous district (W.-Siberia). We should try and link a possible Arctic symposium to existing initiatives, congresses, and organisations.

Three new Honorary Life Members of IMCG

The 2010 IMCG Biennial IMCG Field Symposium and General Assembly provided an opportunity to bestow Honorary Life Membership upon three outstanding peatland conservationists. Two of them, Lebrecht Jeschke and Michael Succow, were instrumental in promoting nature conservation in the former GDR. While Lebrecht Jeschke continued his efforts mainly within a reunified Germany, Michael Succow shifted his efforts abroad. Both have joined the IMCG community several times on its biennial trips, sharing their love and insights. Fred Ellery has done extensive research on peatlands and wetlands in southern Africa, notably also in the Working for Wetlands programme.

Lebrecht Jeschke

Lebrecht Jeschke was born on 15 May 1933 in the small village of Eichdorf near Bromberg (now Bydgoszcz, Poland). Until his family moved west in January 1945, they lived as small farmers and Lebrecht helped his father cut the peat needed for heating. The family settled on a small farm near Biesenthal in Brandenburg; the first years after the war were hard. During his time in secondary school, Lebrecht read the books that cemented his fascination with nature and its conservation. With a camera he borrowed from a friend he made his first photographs.

From 1952 – 1957, Lebrecht studied biology at the University of Greifswald. The scholarship money was spent to buy his own camera. As student assistant to Prof. Bauch he made a photo-documentation on protected plant species and made excursions on motor bike to map vegetation and survey conservation areas. In his diploma thesis Lebrecht performed what nowadays would be called landscape ecological studies on lake vegetation, diving below the surface to make underwater relevées.

After finishing his studies, Lebrecht started working at the Institute for Landscape Studies and Nature Conservation of the Academy of Sciences of the GDR, led by Meusel. He worked here until the re-unification in 1990, deepening his understanding and helping to establish many conservation areas and management strategies. In 1964, Lebrecht wrote his PhD under Profs. Rothmaler and Meusel on the vegetation of the Stubnitz, a nature conservation area on the Island of Rügen (NE Germany).

In an increasingly divided Germany, nature conservationists of the GDR were united in the Kulturbund (Cultural Association) of the GDR, led by Lebrecht between 1975 and 1990. This association addressed the increasing intensification of land use in the GDR and the pressure it put on nature. In conflict with government interests Red Lists of plant species and associations were published. Activities carried out under the umbrella of the Biological Association of the GDR enabled Lebrecht to meet with colleagues like Jasnowski from Poland and Masing from Estonia. Meetings with western friends like Dierßen, Steiner and Grootjans had to be carried out in secret.

With the German re-unification new opportunities arose. In collaboration with then Deputy-Minister of Environment of the first freely chosen GDR government, Jeschke worked on the 'Nationalparkprogramm'. His task was to safeguard nature areas along the German-German border. In 1991, he became director of the National Park administration of the federal state of Mecklenburg-Western Pomerania. In 1997 he retired officially but continued his nature (peatland!) conservation work .

To this day Lebrecht continues to share his love and fascination with friends and students and remains a deep well of knowledge to tap into and learn from.

Michael Succow

Michael Succow was born in 1941 and graduated in biology from Greifswald University (Eastern Germany) in 1965. He stayed at the University for another four years as a scientific assistant. When he openly sympathised with the Prague Spring in 1969, officials of the German Democratic Republic forced him to leave the university. Working outside the university, he finished his PhD thesis on peatland vegetation in 1970.

In 1973 he spent some months in Mongolia as a specialist advisor in soil science. In 1974 he became a scientific associate of the Institute of Soil Science Eberswalde of the Academy of Agricultural Sciences, working in his spare time on nature conservation issues. In 1981 he led GDR nature conservation visits to the Soviet Union. In 1985 he published, together with Hans-Dieter Knapp and Lebrecht Jeschke, a list of endangered plant communities in Eastern Germany. In the period 1985-1987 he made seven visits to Ethiopia as a land use consultant. In 1987 the Academy of Agricultural Sciences awarded him a Professorship, but he was denied a position at a University.

With perestroika in 1989, new opportunities arose. Appointed as Deputy-Minister of Environment in the first post-Communist government, he set up, in collaboration with his colleagues Knapp, Freude and Jeschke, an amazing conservation programme during the last months of the GDR. On September 12, 1990, less than a month before the official end of the German Democratic Republic, the 'Nationalparkprogramm' was sealed by the first freely elected government of the GDR. A system of five national parks, six biosphere reserves and three Nature Parks, covering 4.5 % of the territory of the GDR, was created: the 'silverware of German unity', as Klaus Töpfer, at that time Federal Minister of Environment, expressed.

In 1990 Succow became Vice-President of the Naturschutzbund (NABU), the largest German conservation organisation. Then followed a period, still ongoing, when Succow with his colleagues and collaborators travelled all over the former Soviet Union (Russia - Kamchatka, Yakutia, Karelia, West-Siberia -, Georgia, Mongolia, Kazakhstan, Kyrgyzstan, Uzbekistan, Belarus), advising the new governments on land use and on setting up (biosphere) reserves, national parks and World Heritage Sites.

In 1992, he was appointed professor and director of the Botanical Institute and Botanical Gardens of Greifswald University, the university where he had got his scientific training. His belief in interdisciplinarity led him to the development of a special internationally orientated study programme in Landscape Ecology and Nature Conservation, envisioning synergies between sustainable exploitation and conservation of natural biodiversity. Next to the classical disciplines of landscape ecology and conservation biology, three new Professorial Chairs were integrated in the 'Botanical Institute': one in Landscape Economics (1996), one in Environmental Ethics (1997), and one in International Nature Conservation (1998).

In 1997 he received the Right Livelihood Award - commonly known as the 'Alternative Nobel Prize', for his 'exemplary commitment to safeguard important ecosystems and areas of outstanding natural value for future generations'.

With the prize money of the Right Livelihood Award, he founded the Michael Succow Foundation for the Protection of Nature, which, for instance, helped Azerbaijan and Turkmenistan to create national park programmes. In order to protect and enable 'wildness', the foundation has meanwhile acquired various nature reserves in Northeast Germany. In a multitude of projects the Foundation links research, education, planning and implementation of projects aimed at safeguarding habitats, biodiversity and climate, including projects in peatlands (in Germany, Belarus, Ukraine and Russia), forests (in Turkmenistan und Azerbaijan), and steppes/deserts (in Turkmenistan and Kazakhstan). Succow and his foundation aim on the one hand to safeguard the last remains of pristine nature through he establishment of large reserves. On the other hand they try to develop sustainable ways of land use that provide new economic perspectives for the local population (as in Belarus and Ethiopia).

Since 2001 Michael Succow supervised some 75 MSc and 15 PhD theses focussing on vegetation, site conditions, nature conservation and sustainable land use with a strong international focus and often 'peatlands' as subject. Also with respect to publications he has been highly productive and inspiring. His publications are often devoted to the ecology of peatlands and to nature conservation and include – next to numerous journal papers - books like 'Moore in der Landschaft' (Peatlands in the landscape, with Lebrecht Jeschke), 'Unbekanntes Deutschland' (unknown Germany), 'Die Krise als Chance' (The crisis as a chance), and the magnus opus 'Landschaftsökologische Moorkunde' (Landscape ecological peatland science, with Hans Joosten).

Michael Succow: an ever burning straw fire with unlimited enthusiasm, overview and ideas, and an unequalled sense for seizing the opportunity.

Fred Ellery

Professor Fred Ellery (5 March 1957) has devoted his working life to understanding wetlands in South Africa. Personally, he can think of little he would rather do than spend time walking through and thinking about wetlands – places where earth, water, life and human well-being intersect. "For me, wetlands symbolise in a quiet way, the interconnectedness of humanity and nature. They can be used wisely to support human well-being, but injudicious use of wetlands impacts negatively on human well-being."

Ellery has a deep interest in the rich diversity of wetlands in South Africa, a region where wetlands should be rare given the unusually high average altitude of the subcontinent and erosional nature of the landscape, the low rainfall, and the high evaporation rates. Nevertheless, the region supports remarkable wetlands, including many that are of international importance.

Many students' first exposure to the National Wetland Indaba was made possible through Fred's passionate belief in the value and potential of this forum. He has managed the large Wetland Rehabilitation Research Programme of South Africa. The recent completion under his leadership of an eleven volume set of manuals and guidelines for wetland rehabilitation and assessment, the WET-Management Series published by the Water Research Commission, has made a substantial contribution to capturing and advancing the state of knowledge in this field in South Africa.

Fred has been active in the South African Chapter of the IMCG and he sees the IMCG Honorary Membership as an accolade to the dedication of the wetland community in South Africa in general.

Getting peatlands under Kyoto: arriving at a moving target in Cancun

by Hans Joosten

The drained peatlands of the world are responsible for a substantial proportion of the global anthropogenic greenhouse gas (GHG) emissions. The latest figures indicate that 500,000 km^2 of drained peatlands worldwide release as much as 2 gigatons of CO_2 annually. This means that 0.3 % of the global land area is responsible for a disproportional 6% of the worldwide anthropogenic CO_2 emissions. The most important peatland emission hotspots are located in Indonesia, the European Union, Russia, China and the USA.

From November 29 to December 11 the 2010, the UN Framework Convention on Climate Change (UNFCCC) took place in Cancun (Mexico). The conference brought important new developments regarding peatlands, both under the Kyoto Protocol and under other UNFCCC mechanisms.

The UNFCCC

The United Nations Framework Convention on Climate Change (UNFCCC) has as its goal to achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". Progress with respect to this goal is monitored by means of greenhouse gas inventories that all countries have to submit. The industrialized 'Annex 1' countries have to report their emissions annually, the developing 'Non-annex 1' countries at least as an initial national communication. The reporting follows guidelines developed by the Intergovernmental Panel on Climate Change (IPCC, www.ipcc.ch/). For reporting on emissions from Land Use and Land Use Change, the so-called LUCF Sector, IPCC Good Practise Guidance 2003 is generally used.

This Guidance distinguishes six categories of land (Table 1) that – while tolerating national approaches – are defined as follows (.. = omission of less relevant text):

"*Forest land* .. includes all land with woody vegetation .. It also includes .. vegetation that currently falls below, but is expected to exceed, the threshold of .. forest land .."

"*Cropland* .. includes arable and tillage land, and agro-forestry systems where vegetation falls below the threshold used for forest land .."

"*Grassland* .. includes rangelands and pasture land that is not considered as cropland. It also includes .. vegetation that falls below the threshold used in .. forest land. .. This category .. includes all grassland .., subdivided into managed and unmanaged.."

"*Wetlands* .. includes land that is covered or saturated by water for all or part of the year (e.g., peatland) and that does not fall into the forest land, cropland, grassland or settlements categories. This category can be subdivided into managed and unmanaged..."

"*Settlements* .. includes all developed land, including transportation infrastructure and human settlements of any size, unless they are already included under other categories. .."

"*Other land* .. includes bare soil, rock, ice, and all unmanaged land areas that do not fall into any of the other five categories. .."

The definitions reflect the conceived hierarchy in categories and the strong forest bias of the UNFCCC: you first look whether something is *forest land*. If it is not, it can be something different. *Wetlands* at the lowermost end of the pecking order are the Cinderella of the land use categories. A land can only belong to the *wetlands* category if it does not fall under any other land category…

The Kyoto Protocol (KP)

The Kyoto Protocol (KP) is hitherto the only legally binding mechanism within the Climate Convention. Under the Protocol, 37 States, consisting of highly industrialized countries and countries undergoing the process of transition to a market economy (the 'annex I countries' of the UNFCCC) have legally binding emission limitation and reduction commitments. They have obliged themselves to reduce their emissions in the first commitment period (2008-2012) collectively with 5.2% compared to the reference year 1990.

The Kyoto Protocol was initially developed to curb industrial emissions of greenhouse gases (GHG sources). Simultaneously, however, the possibility

was opened for compensating these emissions by improved land management (GHG sinks) in the so-called LULUCF sector (Land Use, Land Use Change and Forestry).
Whereas the UNFCCC reporting with respect to land is 'land based', i.e. departs from the land categories mentioned above, the accounting under the Kyoto Protocol is 'activity based', i.e. it reports greenhouse gas (GHG) fluxes from human activities. Natural fluxes are excluded. As they have no management, pristine peatlands have no relevance for the Kyoto Protocol, even when they sequester carbon dioxide and emit methane.
The first land use activities that came in mind as carbon sinks (and that were rather easy to monitor) were afforestation and reforestation. Because re-forestation would be senseless without also taking 'de-forestation' into account (to prevent a country first cutting its forest unaccounted and claiming subsequent reforestation as a climate mitigation activity), accounting for all three activities was made mandatory under the Kyoto Protocol (art. 3.3). In contrast, accounting for other types of land use (forest management, cropland management, grazing land management, revegetation) was made voluntary (art. 3.4). This means that a country may choose to include these activities in their accounting or to leave them out.
In principle the activities under the KP have no relation to the categories under the UNFCCC (Table 1). Only with respect to forest management and cropland management a compelling link is made. Categories like grassland and wetlands illustrate that there is no full mutual coverage of categories and activities, because these categories also explicitly include "unmanaged land", i.e. lands that are not subject to any activity.

Table 1: Overview of land categories and activities used in the UNFCCC and the Kyoto Protocol, respectively. In grey the activities that are per definitionem linked to a specific category.

Land categories under the UNFCCC	Activities under the Kyoto Protocol	
Forest land	Afforestation	Mandatory (art. 3.3
	Deforestation	
	Reforestation	
	Revegetation	Voluntary (art. 3.4.) in first commitment period
Forest land	Forest management	
Cropland	Cropland management	
Grassland	Grazing land management	
Wetlands		
Settlements		
Other land		

If a country chooses for reporting a specific 'activity' under the Kyoto Protocol (e.g. grazing land management) it has to account *all* effects (e.g. N_2O emission from manure, carbon sequestration in the soil, …) of *all* practises (e.g. grazing, fertilizing, occasional tillage,…) on *all* lands subject to that activity (= all grazing land).
This requirement has had as a consequence that hardly any country has chosen to account for the activities 'cropland management', 'grazing land management' and 'revegetation' for the first commitment period. Reasons for this reluctance were the assumed complexity in monitoring and the unclear consequences for the national greenhouse gas budget. Only a few countries that were convinced that a specific activity would have a positive effect on their GHG budget chose the respective activity.
'Forest management', in contrast, was chosen by half of the relevant countries. For this activity the greenhouse gas budget can largely be approached by monitoring changes in wood stock for which century long forestry experience exist.

Peatlands in the KP: the current situation
Although 'peatland' is explicitly mentioned in the definition of the UNFCCC land category 'wetlands', 'peatland' is not a separate land category under the UNFCCC. Peatland is a crosscutting type of land: it is land of which the soil properties are so dominant and conspicuous that the peat soil becomes eponymous for the landscape in which it occurs. In fact, lands in all UNFCCC land categories may have a peat soil and may thus be 'peatland'. Within their UNFCCC reporting and KP accounting, countries have to acknowledge this. They have to (but not always do…) distinguish – within the land categories – between organic soil (= largely peat soils) and mineral soil and have to apply different accounting rules for both soil classes.
As GHG emissions from drained peatland may be substantial under each land category, 'peatland rewetting' may be a beneficial practise under each land use activity. The current Kyoto Protocol indeed allows countries to account for emission reduction from rewetting drained peat soil. But this can not be done selectively: if a country wants to account for rewetting, it has to choose an art. 3.4. Kyoto activity (see Table 1) and account for all emission relevant practises on all lands subject to that activity. If the country chooses cropland management as a voluntary activity to be able to account for rewetting drained cropland, it must account for all draining, all ploughing, all fertilizing and all other actions that influence the greenhouse gas emissions from cropland, not only on peat soils, but also on mineral soil. This rule has been introduced to prevent 'cherry picking': only choosing the positive and 'forgetting' about the negative practises.
If, for example, Germany would like to claim emissions reductions from rewetting grassland on peat soil, it not only has to account for the 600 km^2 it has rewetted, but also for the remaining 6,000 km^2 of

grassland on drained peatland *and* for the 60,000 km^2 of grassland on mineral soil. It is fully understandable that the imbalance between workload and reductions gained discourages countries from electing a voluntarily activity only to account for peatland rewetting. Peatland rewetting may indeed lead to disproportional large emissions reductions, but the current Kyoto rules force countries also to monitor and account for much larger areas of land with much less emissions reduction options. The calf becomes larger than the cow…
For peatland rewetting to become attractive for climate change mitigation, the rules of the Kyoto game have to be changed. This has in the past two years been subject of negotiations in the Kyoto Protocol.

Peatlands under a future KP
The current Kyoto Protocol thus provides no incentives for peatland rewetting. The current relevant eligible activities are deterrent because of the conceived imbalance between the inventory/reporting efforts and the limited results. So 'peatland rewetting' on cropland and grassland have little chance as long as accounting of the associated activities is only voluntary. Rewetting land belonging to the land category 'wetlands' (under which also some peatlands, such as peat extraction sites, are classified) is even completely discouraged as no activities (except 'revegetation') are eligible for 'wetlands'.

There are four major options to facilitate peatland rewetting under a future Kyoto Protocol:
1. Adopting a land-based approach;
2. Increasing the number of mandatory activities, while the Protocol remains activity based;
3. Stimulating the voluntary accounting of current art. 3.4 activities;
4. Creating a new activity focussed on peatland rewetting.

Land-based accounting is the full accounting of all greenhouse gas fluxes on all (managed) land in a country. Land-based accounting provides a complete picture of what is happening across the entire land use sector, rather than – as in the current LULUCF practice – countries choosing which land use activities they want to account for. Land-based accounting precludes perverse selection and closes loopholes from (unaccounted) displacement of emissions between sectors and land categories. An example of such loophole is the increasing cultivation of 'biofuels' on drained peat soils, where the reduced emissions from 'biofuels' are accounted under the energy sector, but the increased emissions from the soil are neglected in the land use sector. Land-based accounting would simply allow accounting for peatland rewetting, on whatever land category it would occur.
The political support for direct implementation of such comprehensive approach is, however, limited. There is very little chance that a land-based approach will be adopted for the second commitment period. Many countries sympathise with the option, but argue they are not (yet) able to manage the necessary inventory and monitoring. (This is in fact an odd argument, because since 2005 the developed countries already report all these emissions annually…). Some countries propose to go for full land-based accounting in the third commitment period (after 2018/2020?), but this has not yet materialized in concrete proposals. The last 'proposal of the chair' of the Kyoto Protocol Working Group (AWG-KP) of 10 December 2010 (FCCC/KP/AWG/2010/CRP.4/ Rev.4) reads with respect to Land use, land-use change and forestry:
"The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, …
5. Also agrees that it is desirable to move towards complete coverage of managed lands when accounting for the land use, land-use change and forestry sector, …;
6. Requests the Subsidiary Body for Scientific and Technological Advice to initiate a work programme to explore ways of moving towards more comprehensive accounting of anthropogenic emissions by sources and removals by sinks from land use, land-use change and forestry, including through a more inclusive activity-based approach and a land-based approach, and to report to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its [eighth] session on the outcomes of this work programme;"

As long as a land-based approach is not within reach, countries could account for peatland rewetting under relevant land use activities. Some 80% of the drained peatlands in the developed countries have been drained for agriculture or for forestry. If forest, cropland and grazing land management would be mandatory (currently they are optional), the rewetting of peatlands would simply be accountable under the Kyoto Protocol under the respective activities. An extra activity 'wetlands management' focussing on the land use category 'wetlands' (that covers peat extraction sites and flooded land) would bring little extra, because only 10% of the drained peatlands have been drained for peat extraction.
There is indeed political support in UNFCCC for **increasing the number of mandatory activities** and to move activities from art. 3.4. (the voluntary part) to art. 3.3 (the mandatory part) of the Kyoto Protocol LULUCF sector. The largest chances exist for forest management. Many countries expect to benefit from this, at least when the accounting rules will be adapted (which in itself is a wide field of discussion and one of the main reasons that a new Kyoto Protocol could not yet be adopted in Cancun). Forest management is related to the already mandatory art. 3.3 activity Afforestation, Reforestation, Deforestation (ARD) and many countries have already chosen that activity for the first commitment period (2008-2012). Also cropland management (with its relevance for soil carbon) is under some

consideration of being made mandatory but there the resistance of various developed countries is much larger. The chance that all voluntary activities will become mandatory is virtually nil.

The chances of **increased effectiveness of voluntary accounting** are also very small. Why would countries suddenly start doing what they until now have refused to do? Indeed, the greenhouse gas fluxes from all land use activities are already reported to the UNFCCC 'ex gratia', but to account them under the Kyoto Protocol would be different business…

The last option '**creating a new activity**' under the Kyoto Protocol has been most widely discussed in the past two years. In Cancun (December 2010), unanimity was reached among LULUCF negotiators in the AWG-KP on the definition and content of such an activity, that is now called 'peatland rewetting and drainage'.

The proposed new activity 'peatland rewetting and drainage'

The definition of the proposed new activity is (FCCC/KP/AWG/2010/CRP.4/Rev.4):

'"Rewetting and drainage" is a system of practices for rewetting and draining on land with organic soil that covers a minimum area of 1 ha. The activity applies to all lands that have been drained and/or rewetted since 1990 and that are not accounted for under any other activity as defined in this appendix, where drainage is the direct human-induced lowering of the soil water table and rewetting is the direct human-induced partial or total reversal of drainage.'

The 'career' of this definition over the past two years has been described in earlier issues of the IMCG newsletter. Here we will give some clarification why the current formulation has been chosen.

The name 'rewetting and drainage' emerged only during the Cancun meeting. Earlier the concept activity had been named 'wetland management'. There were several reasons for changing the name:

- 'Wetland management' gave the wrong impression that the activity relates to (or is even restricted to) the UNFCCC *land category* 'wetlands'. The activity is, however, a KP *activity* that – following the activity based approach of the current KP - is applicable to *all* land categories. In practise the activity will be most relevant for the land categories forest land, cropland and grassland, where the majority (80%) of the drained peatlands are found.
- It is elegant to express in a name exactly what is meant. As the activity is defined by 'rewetting and drainage', the name 'Rewetting and drainage' is most appropriate.
- The restriction to organic soils (see below) made it desirable to narrow down the name. Claiming the words wetland management solely for rewetting of peatland would preclude the words to be used for describing other management practises in other types of wetlands.

The phrasing 'and drainage' was chosen to reach a balance in the definition: if climatically positive activities are accounted for, also their negative counterparts must be reported and accounted for. This means: next to 're-forestation' also 'de-forestation', next to 'revegetation' also 'de-vegetation', next to 're-wetting' also 'drainage'. This to prevent that – similar to the de-/re-forestation example above – countries would rewet and account for areas they had just (unaccountedly) drained.

The activity has been restricted to land with organic soil with the following considerations:

- The organic soils are the global hotspots of emissions and of possible emission reductions in the land use sector. Drainage and rewetting of mineral soils has much less (or even a negative) climatic effect. The activity thus focuses on the hotspots and makes it unnecessary to monitor lands where emissions and emission reduction options are much less relevant. In the EU, for example, cropland on organic soil (= 2% of the total cropland) is responsible for 43% of all cropland emissions, whereas cropland on mineral soil (88% of the total cropland) is responsible for only 5% (Jiacomo Grassi, JRC, pers. comm., June 2009). The limitation to organic soils therefore improves the efficiency of the activity substantially.
- Organic soil is a vested concept in UNFCCC reporting and accounting (already distinguished in the IPCC 1996 Guidelines) and is defined in the IPCC 2003 and 2006 Guidelines. The latter Guidelines clearly link (and even equal) organic soils to peat soils. 'Peatland' has not been defined by UNFCCC nor by IPCC (although the term is amply used in IPCC guidelines…)
- A recent IPCC workshop (Geneva October 2010, see report of John Couwenberg in this Newsletter) had concluded that sufficient new science is available to fill the gap in methodological guidance with respect to peatlands. This statement was an important break-through that persuaded many countries to accept the new activity. For mineral soil 'wetlands' the IPCC workshop was not sure that guidance can be provided. By restricting the activity to organic soils the risk was minimized that an activity is created for which no reporting guidance is available.

The restriction 'a minimum area of 1 ha' was made to prevent that every single ditch and every single ditch filling has to be monitored and reported. The activity now refers to an area (ha) not to linear structures.

With the words 'since 1990' the definition reflects that the activity 'rewetting and drainage' will only apply to lands where a lowering or a raising of the water level has taken place since 1990. Areas where the water level has been lowered (or raised) before 1990 and where this lower (higher) water level has been maintained continuously from then onward, are no subject of the activity. The year 1990 has been included:

- to refer to the Kyoto standard reference year 1990 and to express that the activity is subject to 'net-net accounting' (i.e. comparing the emissions in the commitment period with those in the reference year.

In contrast 'gross-net accounting' – as with forests – only looks at emission changes within the commitment period.)
- to define a break-off date for lands to be included. The date 1990 expresses that only lands that have been drained or rewetted since 1990 have to be taken into consideration, not all lands that ever have been drained or rewetted. Both criteria simplify reporting and accounting considerably.

The epitheton 'direct human-induced' was added to stress the anthropogenic character of the activity. Spontaneous rewetting or drainage thus does not fall under the activity and cannot be accounted for.
Special attention was required to define 'rewetting' in a way to exclude 'flooding'. This restriction was politically necessary because some countries were afraid of having to report and account the (sometimes huge) methane emissions from hydro-electricity reservoirs. The definition now excludes 'flooded land', as rewetting is defined as the partial or total reversal of drainage, and drainage as the lowering of the soil water table. This phrasing implies that the activity concerns land that was 'wet', subsequently has been drained, and now is made wet again. Areas that are flooded but never have been drained thus do not fall under the activity '*re*wetting'. Also drained areas that have been flooded to the extent that the mean water level to the surface and the water level fluctuations by far exceed that of the area before drainage, do not comply with the activity.

'Rewetting and drainage' in its presented form may become an effective instrument to facilitate peatland rewetting, as long as no land-based accounting has been achieved or not all art. 3.4 activities have become mandatory.
'Rewetting and drainage' allows accounting for rewetting of lands that currently fall outside mandatory and voluntarily elected activities. 'Rewetting and drainage' furthermore allows blocking the emerging loophole from the link between the unaccounted LULUCF and the accounted Energy sector (biofuels!): In case forest management and cropland management (i.e. the activities with the largest biofuel loophole risks) do not become mandatory, only mandatory 'rewetting and drainage' will close this loophole.

KP emissions trading and peatland rewetting

The Kyoto Protocol currently has three mechanisms for emissions trading:
- International Emissions Trading (IET) in which a country sells its surplus in 'carbon credits'[1] to a country with a deficit in 'carbon credits'. In 'economies in transition' (former East block states) with large amounts of 'hot air' (emissions reductions caused by the economic collapse since 1990) the sale proceeds of IET have to be 'greened' by reinvesting in emission reduction projects or other projects beneficial to the environment (the so-called Green Investment Schemes GIS). In Ukraine, for example, peatland rewetting projects are envisaged to function as a GIS-cover of hot air sales.
- Joint Implementation (JI) relating to projects in which a developed country finances a GHG emission reduction project in another developed country and in return receives the 'carbon credits' achieved by that project.
- Clean Development Mechanism (CDM) relating to projects in which a developed country finances a GHG emission reduction project in a developing country and in return receives the 'carbon credits' achieved by that project.

At present, only IET could function with respect to peatland rewetting if countries would select art. 3.4. activities and account for peatland rewetting. Under JI and CDM, peatland rewetting projects are not (yet) eligible. The developments with respect to art. 3 of the Kyoto Protocol and the desired parallelisation of UNFCCC mechanisms may, however, enhance inclusion of peatland rewetting under these mechanisms.
From a carbon credit generation point of view International Emission Trading, i.e. working for the national budget, is most interesting, as the least requirements are adhered to this mechanism. Joint Implementation and Clean Development Mechanism (similarly to the Verified Carbon Standard of the voluntary market) have much stricter criteria, so that with the same interventions (much) less carbon credits can be generated. In comparison to the voluntary markets the compliance market furthermore generates (much) higher prices for the same emission reduction.

Beyond Kyoto

Next to the KP Clean Development Mechanism, other mechanisms for developing countries are currently under development in the UNFCCC. This is done in the Ad hoc Working Group on Long-term Cooperative Action (AWG-LCA). The AWG-LCA was established in 2007 to enhance mitigation, adaptation, transfers of finance and technology to developing countries, and to create a shared vision on the long-term goal for global emission reduction.
A strong link with peatland conservation and rewetting is found in the REDD+ mechanism (Reducing Emissions from Deforestation and Forest Degradation). On REDD+ substantial progress was made in Cancun. Many heavily threatened tropical forests and originally forested areas in SE Asia are actually peat swamps. REDD+ offers great opportunities for reducing the massive CO_2 emissions from peatlands in countries like Indonesia, Malaysia and Papua New Guinea. Important will be the

[1] In climate policy various concepts related to 'carbon credits' are distinguished, including Assigned Amount Units (AAUs), Emission Reduction Units (ERUs), Removal Units (RMUs) and Certified Emission Reductions (CERs) in the Kyoto Protocol, and various types on the voluntary market. For simplicity we call them all 'carbon credits'.

question to what extent the rules for developed countries under the Kyoto Protocol will also be applied to developing nations under REDD+.
Other LCA-mechanisms that may address peatlands are the NAMAs (Nationally Appropriate Mitigation Actions) and new market-based mechanisms for developing nations recently being proposed by the European Union, New Zealand, Korea, Colombia, Switzerland, Turkey and others. Further negotiations in 2011 (starting April 2011 in Bangkok) will determine to what extent peatland emissions can be addressed.

The future of Kyoto
Although agreement was reached among negotiators on a new 'rewetting and drainage' activity for peatlands, no overall agreement could be reached in Cancun for the entire land use and forestry sector of the Kyoto Protocol. The stumbling block were the rules for forestry after 2012. The proposed accounting rules for the forest sector strongly deviate from the transparent net-net accounting of other activities and lead to inflation by pretending more reductions than in reality are happening. Civil society organisations are furthermore concerned that the proposed forestry rules will lead to a considerable loss of natural forest.
On the other hand, the developed countries demand that emission reductions of developing countries under REDD+ (for which the former have to pay) will be measured, reported and verified (MRV) in a transparent international process. The developing countries, in reaction, observe correctly that the developed countries do not apply similar strict criteria to their own LULUCF sector…
Since Bali (2007), considerable differences in perspectives have become apparent within the UNFCCC. In 2010 it appeared that these differences may be a serious threat to the Kyoto Protocol system. The developing countries emphasize that the developed countries must take the lead by committing to deep emission cuts and by providing finance and technology to developing countries. The developed countries (incl. the USA), on the other hand, expect that major emitting developing countries also adopt binding emissions reduction targets. Countries like Japan, Russia and Canada have stated not to continue with a new legally binding Protocol after 2012, if major emitting countries that are currently outside the Protocol (USA, China, Brazil, South Africa, …) do not accept similar reduction obligations.
Substantial differences also exist on how the aggregate emissions reductions have to be established. Some developed countries (notably the EU) want to follow the current top-down approach of the Kyoto Protocol: agreeing to a global goal, with each country making national commitments that jointly with other countries would reach the agreed goal. Other countries (led by the US) prefer a bottom-up approach, in which each country pledges what it could do and then see where we have come. This 'pledge and review' is strongly resisted by developing nations represented by the 'Group of 77 and China'.
Anyway: concrete pledges and reduction commitments may be (strongly) influenced by how land use, especially forests and peatlands, will be treated within a new climate deal. Cancun has brought considerable progress with respect to peatlands. The awareness of the importance of peatlands has strongly increased and peatland rewetting may get its fair place among the activities under a successor of the Kyoto Protocol. The next global climate gathering, in South Africa in December 2011, will show how far the negotiations in 2011 have brought us. The next stage will be Bangkok: April 3- 8, 2011.

Cancún climate change summit: The final day as it happened
5.04pm: Our correspondent John Vidal emails with some good news:
If you're into peat, cheer. After four long years negotiation, the draft Kyoto protocol text on wetlands is out and, amazingly for campaigners, it will allow countries to reduce their emissions from degraded peatlands under the Kyoto protocol by rewetting them.
This is a huge step forward, and hats off to Iceland and Belarus. It's good news for Britain too, because Scotland has extensive degraded peatlands. The main beneficiary will be Indonesia, one of the biggest carbon emitters in the world because of its deforestation, which has dried out thousands of square miles of peat for its oil palm plantations.
But don't jump for joy too soon! It's a voluntary measure, which means there will be no compulsion on countries to rewet their peatlands, and it depends on the final package of agreements made here. Because it comes under both the LULUCF (a wacky acronym for land use change and forestry, which only about eight people in the world understand,) and REDD (reduced emissions from deforestation and degradation) negotiations, if either of these fall in the final negotiations later today, all could be lost. But this is the first good news in these talks. …
7.32pm: Here is one – much needed – tiny ray of light, says our environment correspondent in Cancun, Suzanne Goldenberg. It comes from dark soils of peatlands, which store vast amounts of carbon but have been vulnerable to destruction:
Campaigners say negotiators have produced a draft agreement to include peatlands in forest protection or REDD programmes.
That's a breakthrough for those who have been working to get the international community to focus on peatlands. The effort got a boost in making their case on Wednesday when the billionaire financier George Soros told a side event he was very concerned about emissions produced by destruction of peat in Indonesia.

He noted that millions of acres of peat land in rain forest had been cleared out in the 1990s with the intention of growing rice. But Soros, who is investing in conservation projects in Indonesia, said he had seen a recent shift in policy with the authorities imposing a temporary two-year ban on cutting peatlands.
He said the move had required a total change in thinking about forests and natural resources. "Forests were treated earlier like a gold mine or like oil. It was mining basically and now it has to be preservation."
Source: The Guardian:
http://www.guardian.co.uk/

Peat bogs and climate change: Wet, wet, wet
Forests are not the only habitat whose conservation matters to the climate
On December 11th climate negotiators at the United Nations' meeting in Cancún, Mexico, agreed that peatland "rewetting", as it is rather inelegantly known, could be a way for some countries to offset emissions of carbon dioxide from other sources, under the Kyoto protocol or any agreement that follows it.
Source: The Economist, Dec 16th 2010
http://www.economist.com/node/17730180

IPCC Expert Meeting on HWP, Wetlands and Soil N_2O

Geneva, 19-21 October 2010

The reporting and accounting of greenhouse gas emissions and removals from the land use sector suffers from several gaps in methodological guidance. The Subsidiary Body for Scientific and Technological Advice (SBSTA) provides the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) with the necessary science as a basis for policy development. On its 32nd meeting in June 2010, SBSTA invited the independent scientific body of the Intergovernmental Panel on Climate Change (IPCC) to organize an expert meeting to explore the need and ways to clarify methodological issues related to reporting on harvested wood products (HWP), wetlands and nitrous oxide emissions from soils. From 19 to 21 October 2010 the Task Force on National Greenhouse Gas Inventories (TFI) of IPCC convened a meeting in Geneva of scientific experts to address the above three issues. A break-out group of about 15 people concentrated on the wetland (peatland) issue. IMCG members Andrej Sirin, John Couwenberg and Faizal Parish were invited to represent Wetlands International and the Global Environment Centre.
The SBSTA explicitly identified 'rewetting of previously drained wetlands or wetland restoration' as a topic that should be addressed at the meeting. The rewetting of peatlands is a particular gap in the IPCC guidelines for reporting on greenhouse gas emissions. The 2006 version of the IPCC Guidelines addresses peatland soils in several ways. The guidelines cover emissions from croplands (incl. cranberries and other ericaceous fruits), grasslands and forest lands on organic (peat) soils. Furthermore, emissions from peatlands cleared and drained for the extraction of peat are covered in an annex (Chapter 7) to the main Guidelines. The main questions to be solved at the meeting were whether the 2006 guidance needs updating, also with respect to emission factors and whether guidance can be given on rewetting.
Four presentations were given on peatlands. In his presentation Emissions from peat soils John Couwenberg (University of Greifswald, Germany) summarized data on CO_2, CH_4 and N_2O emissions from boreal, temperate and tropical peatlands based on recent reviews. Dominique Blain's (Environment Canada) presentation addressed the carbon balance in pristine, drained, rewetted and restored peatlands based on recent studies in Canada and elsewhere. Matthias Drösler (TUM, Germany) presented results from a recent project collecting data on greenhouse gas budgets for European (EU) and German peatlands. The project covers both drained and rewetted/restored peatlands. Faizal Parish (Global Environment Centre, Malaysia) presented emission data from peatland fires in South East Asia. In addition to peatlands, also emission from hydro-electricity reservoirs were addressed and other non-peatland wetlands were identified as in need of additional guidance, including wetlands for waste

water treatment and coastal wetlands like salt marshes and mangroves.
The meeting of experts concluded that since the completion of the 2006 IPCC Guidelines new science has become available that makes it possible to provide guidance to address rewetting and restoration of peatlands. This guidance should cover all relevant gases (CO_2, CH_4 and N_2O), take into account water level (possibly distinguishing between rewetted and flooded) and address climatic zones (boreal, temperate and tropical), vegetation, and nutrient status. The emissions associated with Land Use (cropland, grassland, forestry, peat extraction) should be reassessed. Furthermore, emissions reductions associated with rewetting of drained peat soils (Land Use Change) shall be analysed to see whether typical emission factors can be developed for different land use classes. In addition, emissions from ditches and waterborne carbon shall be addressed with the option of including these emissions in overall emission factors for different land use activities.
A summary report of the expert meeting was presented to a UNFCCC workshop on reporting held in Bonn, 3-4 November and to SBSTA Meeting 33 held at the UNFCCC Conference of Parties in Cancun in November/December 2010. At this SBSTA meeting in Cancun, UNFCCC invited the IPCC to prepare additional guidance on wetlands, focusing on the rewetting and restoration of peatlands. Document FCCC/SBSTA/2010/L.12, Article 7 states:

"The SBSTA took note of the summary of the co-chairs of the IPCC expert meeting on harvested wood products, wetlands and N_2O emissions from soils. Noting that science has developed in some areas with regard to wetlands, the SBSTA invited the IPCC to undertake further methodological work on wetlands, focusing on the rewetting and restoration of peatland, with a view to filling in the gaps in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (…) in these areas and to complete this work for the thirty-ninth session of the SBSTA."

An "IPCC Expert Meeting on Scoping Additional Guidance on Wetlands" is to be held in Geneva, Switzerland from 30th March to 1st April 2011. This meeting aims to produce a draft work plan including Terms of Reference and an annotated chapter outline for a supplement to the 2006 IPCC Guidelines providing additional guidance on wetlands. This work plan will be presented to the IPCC Plenary for their approval in May 2011. The work plan will aim to produce a finished document for approval by the IPCC in 2013.
Hopefully this timeline will not only provide the new guidance in time for reporting of the Parties to the UNFCCC, but also for the second commitment period of the Parties to the Kyoto Protocol. The second commitment period of the Kyoto Protocol will start in 2013 and article 5.2 of the Protocol demands that accounting may only be based on guidance available before the start of the commitment period.

John Couwenberg

CBD COP10 – Tempura, Typhoons and Tense Negotiations

by Richard Lindsay, Stefan Hotes, Amélie D'Astous & Line Rochefort

Overview
Well, in the end it went right to the wire ...and beyond...
On behalf of the IUCN UK Peatland Programme and the UK Wildlife Trusts Richard Lindsay and Stefan Hotes attended the whole two weeks of the 10th Conference of Parties (COP10) of the United Nations Convention on Biological Diversity (CBD) held in Nagoya (Japan) 18-29 October 2010. For the present article, we have combined our view of the events and outcomes with a valuable review of official documents issued thus far undertaken by Amélie D'Astous and Line Rochefort.
For their part, Stefan and Richard presented the peatland story to everyone who would listen, including – within the first day or two of being there – the CBD Secretariat, the German Delegation, and the Ramsar Secretariat. Mikke Löfroth, attending as part of the Swedish Delegation, was also extremely helpful in putting forward the peatland message. We were also very kindly offered a Side-Event slot by the UK Department for Environment, Food and Rural Affairs (DEFRA), which gave us an opportunity to make a formal presentation about peatlands and the CBD.

- We distributed full-colour peatland flyers, placing at least one flyer on every delegate-group desk at the Conference;
- We distributed invitations to the DEFRA/IUCN UK Peatland Programme Side-Event, placing at least one invitation on every delegate desk;
- We hosted and presented DEFRA/IUCN UK Peatland Programme Side-Event, with Richard Lindsay and Stefan Hotes both speaking about the significance of peatlands, the range and scale of programmes currently being undertaken in the UK to restore ecosystem resilience, and the challenges still facing peatland conservation and sustainable use;
- The relatively small but diverse audience (unfortunately two crucial ad-hoc finance meetings were called in parallel with our Side Event)

included members of national and NGO delegations, and the subsequent discussion confirmed and emphasised concerns about the ongoing low profile of peatland ecosystems, and highlighted evidence that the current academic review process is failing not just peatlands but has been found by Wetlands International to be a problem involving all wetland types.

Following Plenary Sessions, work on the Conference documents was divided into Working Group I, which dealt with the thematic papers covering: Inland Waters Biodiversity, Marine and Coastal Biodiversity, Mountain Biodiversity, Protected areas, Sustainable Use of Biodiversity, Biodiversity and Climate Change, Agriculture and Biodiversity, Biodiversity of Dry and Sub-humid Lands, Forest Biodiversity, Biofuels and Biodiversity, Invasive Alien Species, Global Taxonomy Initiative, and Incentive Measures.
Working Group II considered: Report of the Global Environment Facility, Progress Toward the 2010 Biodiversity Target, Revised Strategic Plan, Operations of the Convention, Strategy for Resource Mobilisation, Scientific and Technical Operation, Technology Transfer, Global Strategy for Plant Conservation, Communication, Education and Public Awareness, Cooperation with Other Conventions, Financial Mechanism, Indigenous Rights and Involvement; New and Emerging Issues.
The main areas of contention were inevitably those paragraphs relating to Access to genetic resources and Benefit-Sharing (ABS), the Strategic Plan, or Resource Mobilisation. By 28th October, all issues other than those being dealt with by Working Group II (Strategic Plan, etc.) had been resolved. Consequently all papers were approved in Plenary on late afternoon on 29th October, with the proviso that those paragraphs which required wording from the Working Group II documents would be amended to reflect the agreed wording of those documents, should they be approved.
However, negotiations in Working Group II had made so little progress towards resolving the key issues that it looked as though everything was going to collapse. For almost two weeks, Bolivia, Brazil, the EU and several developing nations had been locked in arguments about certain key elements of the main documents. In the case of Bolivia, this was an ideological battle resisting the idea of any funding mechanisms from the private/commercial sector. Other delegations were arguing over the essentially practical question of how biodiversity should be shared. Everyone was talking about a 'Copenhagen result', meaning that COP10 might end with nothing resolved. The Japanese hosts were so anxious to have something tangible which could be named the 'Nagoya something' that there were even rumours circulating that they would invite everyone back next year, at Japan's expense, to conclude an agreement.
When everyone gathered in the vast Event Hall at 17:00 on 29th October, we were warned that this would be the last Plenary. In other words, we would all be there until a deal was reached, or until the deal was formally voted down. People settled down for a long session.
Ten hours later, at around 3 a.m., during a knife-edge review of positions, it was the Ukraine who tipped the balance of power, agreeing on behalf of its regional Contracting Parties to the proposed ABS wording. Bolivia gave a long political speech which sounded as though they would refuse to agree, but then astonished everyone by stating that, provided their statement was included in the documentation, they, too, would agree to the ABS wording.
The Event Hall of the Nagoya Congress Centre saw the capacity-bursting audience cheering and applauding as the key documents – Access and Benefit-Sharing, Resource Mobilization and the Strategic Plan – were finally approved without dissent after (in the case of ABS) more than 18 years of difficult and sometimes acrimonious discussion.
At 3:30 a.m. the Japanese Environment Minister Ryu Matsumoto, as President of COP10, declared that the ABS agreement would henceforth be known as the Nagoya Protocol while the various targets in the Strategic Plan would be known as the Aichi Targets (after the Prefecture in which Nagoya is located). He then closed the Conference to enthusiastic applause, while the rain from an approaching typhoon hammered on the roof of the Congress Centre. A remarkable deal had been achieved under the auspices of our Japanese hosts, a deal which has since been described by some as the most historic since the signing of the Kyoto Protocol in 1997.

Side-events and lobbying
In addition to hosting our own side-event, Stefan and Richard attended a total of 17 other side-events, and in many of these we had the opportunity to raise the issue of peatland conservation. One of the rather depressing features of these events was the number of times we were shown images of peatlands while the speakers talked of 'heathlands', 'upland grasslands', 'forests', 'coastal zones', 'wetlands' - but no-one ever mentioned the words 'peat' or 'peatlands'. As we observed in our side-event, peatlands are still very much the victim of the Cinderella Syndrome (invisible to us while working hard for us) and the Attenborough Effect (those with the influence and opportunity to raise the profile of peatlands are simply not doing so).
We spent a considerable amount of time talking to a wide range of people about these issues, and the potential benefits of a Decision document specifically addressing peatland issues within the CBD. The key message is that forests on peat are identified and managed as forests, heathlands on peat are identified and managed as heathlands, grasslands on peat are identified and managed as grasslands, even wetlands on peat are identified and managed as wetlands rather than peatlands. The point being that whenever we manage a peatland system as something *other* than a peatland, we cause fundamental harm to the

underlying nature of the system. This concept is what is needed as the central theme of a peatland Decision document, perhaps for COP11. Stefan and I (greatly assisted by Mikke Löfroth and Faizal Parish, who were also arguing effectively on behalf of peatlands) have now discussed this with more than 40 organisations and individuals, including the Secretariat of the CBD, the Ramsar Bureau, Wetlands International, EU Commission DG Environment, IUCN, WCMC, UK DEFRA, WWF Germany, and the Joint Research Centre European Commission.

Some of the key peatland-related points in the agreed COP10 documents

Although the Nagoya Protocol is undoubtedly a landmark agreement, its main focus is on the equitable sharing of profits gained through the use of genetic information, ensuring that nations, local communities and indigenous groups which provide genetic material benefit from subsequent commercialisation of such genetic material. As such, the Nagoya Protocol itself has limited direct relevance to peatland conservation. The Aichi targets within the Strategic Plan (2011-2020), on the other hand, provide substantial opportunities for peatland conservation and sustainable use. The most important documents to emerge from Nagoya for peatlands are thus the Strategic Plan with its Aichi Targets, and its associated Thematic Decisions covering, in particular, Mountain Biological Diversity, Inland Waters Biodiversity, Protected Areas, Sustainable Use of Biodiversity, Incentive Measures, Agricultural Biodiversity, Biodiversity and Climate Change, and Biofuels and Biodiversity.

The Strategic Plan (2011-2020)

- The Mission of the Strategic Plan is to: "Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services.... To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used...adequate financial resources are provided... biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach.
- The Strategic Goals and 2020 Headline Aichi Targets have a number of potentially peatland-specific objectives:
- Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.
- Target 10: By 2020, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.
- Target 11: By 2020, at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through... protected areas and other effective area-based conservation measures...
- Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contributed to health, livelihoods and well-being, are restored and safeguarded...
- Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Implementation, Monitoring, Review and Evaluation

- The Strategic Plan will be implemented primarily through activities at the national or sub-national level, with supporting action at the regional and global levels....
- Ongoing research on biodiversity and ecosystem function and services and their relationship to human well-being [is a key element to ensuring the effective implementation of the Strategic Plan].

The Thematic Decisions then repeat these actions in various forms directly relevant to the particular Theme. However, certain other key actions are also introduced which either make explicit reference to peatlands or which have clear relevance to peatlands:

Mountain Biodiversity

Article 5. Encourages Parties, other Governments, relevant organisations and indigenous and local communities, to address climate change and adaptation and mitigation issues for mountain biological diversity...by: (b)Undertaking measures, where appropriate, to reduce deforestation and restore degraded mountain forest ecosystems, conserve carbon in the mountain soil, including peatlands and other wetlands in order to enhance the role of mountains in providing important ecosystem services such as natural carbon and water regulation

Inland Waters Biodiversity

The Conference of Parties

(25) Notes that inland water ecosystems are significant stores of carbon and that peatlands and other wetlands have very high carbon stocks, particularly below ground, as recognised in decision IX/16D and in the report of the second Ad Hoc Technical Expert Group on Biodiversity and Climate Change (UNEP/CBD/SBSTTA/14/INF/21), which notes that peatlands and other wetlands store more carbon than the world's tropical rainforests;

(26) Urges Parties and other Governments to: (c) Recognise the inter-dependence of the carbon and water cycles in their climate-change mitigation and adaptation activities and, in particular, the role of biodiversity in contributing to a sustained and functioning water cycle, the availability of water to

support ecosystem functioning, water-related ecosystem services and carbon storage services;
(35) Welcomes with appreciation the development and expanded use of tools to assist implementation of the programme of work by the Parties, other Governments, international and non-governmental organisations and other partners, and encourages their further development and application...

Protected areas
The Conference of Parties
[B: Issues that need greater attention]:
(14) Invites Parties to:
(d) Identify areas that are important for both biodiversity conservation and for climate-change mitigation and/or adaptation, including carbon sequestration and maintenance of carbon stocks, and where appropriate protect, restore and effectively manage and/or include them in the protected areas systems with the aim to increase co-benefits for biodiversity, for addressing climate change and human well-being, while recognising that biodiversity conservation remains the primary objective of protected areas;
(e) Support and finance the conservation and management of naturally functioning ecosystems and in particular, protected-area systems in contributing to carbon sequestration and maintenance of carbon stocks as well as to ecosystem-based approaches to adaptation to climate change, while recognising that biodiversity remains the primary objective, and to link improved design and management approaches for comprehensive and integrated protected area systems (including buffer zones, corridors and restored areas) into national strategies and action plans for addressing climate change, including through existing national adaptation strategies and plans;
(f) Further develop tools applicable for use by relevant national authorities and stakeholders for the planning of protected-area networks and climate-change mitigation and adaptation measures, that combine among other issues, biodiversity, natural carbon storage and other ecosystem services and as appropriate, vulnerability assessments for terrestrial as well as marine and coastal protected areas.

Sustainable Use of Biodiversity
The Conference of Parties:
(2) Invites Parties and other Governments to:
(k) Support the implementation of pilot projects on the sustainable use of biodiversity, taking into account the ecosystem approach, with the objective of generating successful management models that take into account conservation of biodiversity at large scales.

Incentive Measures
The Conference of Parties:
(8) Invites national, regional and international funding institutions to support the building or enhancement of national capacities for assessing the values of biodiversity and ecosystem services, for identifying and removing or mitigating perverse incentives, and for the design and implementation of positive incentive measures for the conservation and sustainable use of biodiversity;
(9) Recognising that perverse incentives harmful for biodiversity are frequently not cost-efficient and/or not effective in meeting social objectives while in some cases use scarce public funds, urges Parties and other Governments to prioritise and significantly increase their efforts in actively identifying, eliminating, phasing out, or reforming, with a view to minimise or avoid negative impacts from, existing harmful incentives from sectors that can potentially affect biodiversity...
(10) Noting the essential role of regulation and the complementary role of market-based instruments, encourages Parties and other Governments to promote the design and implementation, in all key economic sectors, of positive incentive measures for the conservation and sustainable use of biodiversity...
(11) Acknowledging the crucial role of communication between the public and private sectors in developing incentive measures that are supportive of the national implementation of the Convention, encourages Parties and other Governments to engage with businesses and enterprises on ways and means to contribute to the national implementation of the Convention, including through the design and implementation... of direct and indirect positive incentive measures for the conservation and sustainable use of biodiversity.

Agricultural Biodiversity
The Conference of Parties
(4) Requests the Executive Secretary and invites the FAO of the UN to work together on *inter alia*: (e) Potential actions to promote sustainable biodiversity-related agricultural practices that contribute to biodiversity as well as ecosystem based carbon sequestration of soils and to conserve and restore organic carbon in soil and biomass.

Biodiversity and Climate Change
The Conference of Parties:
(8) Invites Parties and other Governments... to consider the guidance below on ways to conserve, sustainably use and restore biodiversity and ecosystem services while contributing to climate-change mitigation and adaptation:
(a) Identify, monitor and address the impacts of climate change... on biodiversity and ecosystem services, and assess the future risks for biodiversity and the provision of ecosystem services using the latest available vulnerability and impact assessment frameworks and guidelines;
(b) Assess the impacts of climate change on biodiversity and biodiversity-based livelihoods, particularly with regards to livelihoods within those ecosystems that have been identified as being particularly vulnerable to the negative impacts of climate change with a view to identifying adaptation priorities;

(c) Reduce the negative impacts from climate change as far as ecologically feasible, through conservation and sustainable management strategies that maintain and restore biodiversity;
(d) Implement activities to increase the adaptive capacity of species and the resilience of ecosystems in the face of climate change, including, *inter alia*:
(i) reducing non-climatic stresses such as pollution, over-exploitation, habitat loss;
(v) restoring degraded ecosystems and ecosystem functions;
(vi) facilitating adaptive management by strengthening monitoring and evaluation.
(n) Implement ecosystem-management activities, including the protection of natural forests, natural grasslands and peatlands...
(s) Where appropriate, promote biodiversity conservation, especially with regard to soil biodiversity, while conserving and restoring organic carbon in soil and biomass, including in peatlands and other wetlands...
(t) Enhance the conservation, sustainable use and restoration of marine and coastal habitats that are vulnerable to the effects of climate change or which contribute to climate-change mitigation, such as mangroves, peatlands....

There are then several other topics, such as threatened species, invasive species, citizen education, local and native rights, genetic diversity and the Global Strategy for Plant Conservation, which all have a potential part to play in the peatland conservation process.

Opportunities for peatlands
The key over-arching opportunities for peatlands - other than developing a specific Peatlands and Biodiversity Decision for COP11 - would thus appear to be that:

- biodiversity is explicitly recognised as embracing species diversity *and* ecosystem structure, function and services, and thus for example the naturally species-poor but structure-rich bog landscapes are seen as equally valuable as other more traditionally species-rich ecosystems ;
- Aichi Target 14 simply states that ecosystems important for their services (and peatlands are widely-recognised as important service providers) are restored, but unlike Target 11 there are no figures given and thus any-and-all scales of restoration are by implication required and expected;
- the retention of carbon stores through appropriate management and restoration is a strong message running through several elements of the Strategic Plan and its Thematic Decisions, lending considerable weight to the arguments for peatland conservation and restoration.

Overall, the IMCG can feel pleased that there are so many references to peatland or peatland-related issues within the Decision Documents of COP10. However, a fault-line still exists in the fact that while everyone seems willing to consider (at least when pressed) that peatlands are indeed important, a continued failure to recognise these systems and their essential ecosystem features *on the ground*, whether this is by land managers, field surveyors, resource-mapping specialists, research scientists, or policy makers, means that these systems still suffer from the Cinderella Syndrome and are continued victims of the Attenborough Effect

Working for Wetlands: celebrating 10 years of learning

compiled by Piet-Louis Grundling

The Working for Wetlands Programme in South Africa is celebrating its 10th anniversary in 2010. The programme has been setting the trend for ecosystem restoration in South Africa, and its successes are acknowledged internationally, not only in wetland conservation, but also in poverty alleviation and skills transfer.
In 2000, the Working for Wetlands Programme was launched out of a need to rehabilitate wetlands spread throughout the country. To date there are about 40 wetland rehabilitation projects all over South Africa. This has not only seen thousands of people getting employment but has also made an impact in skills development.
In 2009 alone, Working for Wetlands rehabilitated 95 wetlands in all nine provinces and in the process created employment for more than 1500 people and made use of 250 small businesses.
Peatlands are a relatively rare and unique wetland type in Southern Africa and are important ecosystems due to the biodiversity they support, their limited size and distribution. It is significant to note that 40% of the projects in Working for Wetlands have been associated with mires and peatlands.
Many valuable lessons have been learned in the past 10 years ranging from rehabilitation techniques and monitoring protocols to community involvement in wetland conservation. One of the challenges in the programme is to maximise its resources in a socio-economic environment where poverty alleviation and job creation are more often than not the prime motivation for government to invest in conservation

management. To enable it to stay competitive in sourcing funds from government the programme often forms partnerships both within government but also with NGOs. One of these successful partnerships is with the Mondi Wetlands Project (MWP).
The programme leader of the MWP is sharing his experiences with us:

My walk with Working for Wetlands.
Impressions from David Lindley who was a founding force behind the establishment of Working for Wetlands in 2000 and who continues to be involved as part of its Steering Committee.

David Lindley is head of the Mondi Wetlands Programme (MWP). The Programme itself is a partnership between two NGOs (Wildlife and Environmental Society of South Africa, WESSA and WWF-South Africa), together with two corporations (Mazda and Mondi); although the partners have established a distinct identity for the MWP. The Programme is striving towards its goal of bringing about social change that encourages wetland users and owners to manage their wetland resources in a more environmentally relevant manner. You can read more about the MWP at http://www.wessa.org.za/index.php/Programs/Mondi-Wetlands.html

I think back to 1996 – 2000, when there were literally only a handful of Wetlanders (wetland conservationists) in South Africa, all passionate about conserving South Africa's wetlands and trying to dream up ways of rehabilitating and working with land users to better manage those rapidly being degraded. That really isn't long ago; and back then none of us really had much knowledge or experience of working in wetlands. But we really did love them. Many of the older, more experienced wetland researchers had emigrated to other countries, leaving behind a bunch of raw, inexperienced but passionate young wetlanders. Through trial and error our knowledge slowly grew as we learnt from each other by walking through our wetlands.

Thilivhali Nyambeni, an IMCG member instructing a Working for Wetland team on how to builds a small weir in the Molopo mire to arrest erosion and to lift up the water table. Thilivhali started of as a student project manager. He is now, 8 years later the Provincial Coordinator of Working for Wetlands in the Free State Province of South Africa.

Slowly we began to piece together what we thought was an amazingly smart understanding of how wetlands worked, and we dreamed up some ingenious methods of how to rehabilitate these terrible gully erosion problems in our wetlands. But the problem was we had no money to implement these costly rehabilitation methods. Then after the long standing efforts of a small group of people, Working for Wetlands was born in 2000 and the South African government came to the wetland party like never seen before. We had money, we had people, and the means to our dreams. Wetland research was given a massive adrenalin boost. The science supporting wetland understanding, rehabilitation, and management mushroomed. In a relatively short space, our simple wetlands became incredibly complex.

Success – and the team is proud of their achievement: truly empowering!!

Our previous knowledge of wetland dynamics and the technical knowhow required to rehabilitate them became as outdated as the dinosaur. The fast swelling numbers of Wetlanders in this massively growing wetland industry spurned on by Working for Wetlands, began to laugh at our original wetland understanding and rehabilitation designs, as being quite simplistic and outdated. At first the original handful of Wetlanders were taken aback. But then we realised that this was progress! And sustainable progress at that. We thought about where we had come from since 1996, to where we were now, and it has indeed been a quantum leap. Our original ideas were certainly outdated, and the new understanding of wetlands and how to rehabilitate degraded ones, has changed in a massive way. This huge leap forward in South African wetland conservation is largely due to the snowballing effect of Working for Wetlands, and all those hard working people that contribute to its success. Which hopefully still has many years ahead of it.

My side of the coin - impressions of Eric Munzhedzi.
Working for Wetlands has played a major role in the development of many people's lives, including my own. In 1999, Piet-Louis Grundling visited the University of Venda and gave a presentation on peatlands which was coupled with site visits to Thathe Vondo peatland and Luludi wetland. This visit started my interest in wetlands. When I joined Working for Wetlands (WfWet) with about 7 other students we gained lots of knowledge and experience. New careers were established and strategies developed to continue the struggle for wetland protection in the country.
South Africa has been made aware of the value of its wetlands and peatlands. Illegal activities affecting wetlands are being reduced as a result of provincial wetland forums that strengthen environmental law enforcement for the protection and conservation of wetlands and the environment as a whole. Peat mining activities have been reduced to two wetlands only and miners are looking for alternatives instead of additional peat resources.
Wetland awareness is increasing within the country, reaching different communities, cultures and backgrounds through different approaches. Celebration of World Wetlands Day has become an annual activity on a national, provincial as well as regional level, were local people have an opportunity to attend.
It has been ten years since Working for Wetlands was established and we are now starting a sister programme called Wise Use of Wetlands. We hope to set a new trend in wetland conservation in South Africa with this programme. The focus on engagement and involvement of local communities will empower them to take ownership and care of the investments in wetland conservation.
I have grown into WfWet over the past 10 years and it has meant a lot to me and my family. I believe that in the next 10 years WfWet will continue to make substantial contributions not only to wetland conservation in South Africa, but also to uplifting its people.

Eric Munzhedzi is the Implementation and Aftercare Manager of WfWet. His responsibilities include project implementation, planning, contract management, operations management, supervision of provincial coordinators and application of norms and standards for projects. He has been with the programme since its inception in 2000 and has worked his way up to the position that he now holds.
He holds a BA degree in Education from the University of Venda where he majored in Geography and Biological Sciences. He worked for the university as a research assistant and later as a laboratory assistant. He has worked in the rehabilitation of significant peatlands in the country like the Bodibe peatland in the North West. Eric also has an internationally recognised certificate in African Wetland Management from the Kenya Wild Life Training Institute in Naivasha.
Eric is an active Main Board member of the International Mire Conservation Group

Hot of the Press
A tender was rewarded to a Lesotho company in the past few weeks to start with the physical rehabilitation of mires in Lesotho. The Working for Wetlands team provided guidance in the planning process. The IMCG acknowledges the contribution of Working for wetlands and its partners (such as the MWP) to peatland and mire conservation in southern Africa. We wish them success in the next 10 years – may they continue to make a difference!
Visit the Working for Wetlands at http://wetlands.sanbi.org/wfwet/ to read more on the programme's work in South Africa.

Good news from Kobuleti (Georgia/Transcaucasia)

by Matthias Krebs, Izolda Matchutadze, Mamuka Gvilava

The mire Ispani 2 is globally unique as the type locality of the 'percolation bog'; representing one of only two percolation bogs known to the world (Joosten et al. 2003, Krebs et al. 2009). The rate of peat accumulation is very rapid. In addition, the bog is home to an abundance of rare endemic and relict species.

Ispani 2 is situated in the Kolkheti Lowlands in Georgia (Transcaucasus) close to the Black Sea. The site was designated as Wetland of International Importance (Ramsar Site N°894 "Ispani II Marshes") in 1996 and is protected under national law within the Kobuleti Strict Nature and Managed Reserve since 1999.

Recently, the mire was under threat of a road construction project (Fig. 1). The Government of Georgia received a loan (USD 500 million) from the Asian Development Bank (ADB) through a Multitranche Financing Facility for implementing the Road Corridors Development Program to rehabilitate, improve and newly construct several roads in various regions of Georgia. The program includes the 48.4-km Adjara Bypass around Kobuleti, where the mire Ispani 2 is situated.

Engconsult Ltd. was responsible for the engineering design and preparation of an Environmental Management Plan (www.eng-consult.com). Following obligations of the ADB Bank, Engconsult Ltd. had to perform two public consultations during the preparation of the EIA. At the first consultation (April 2009) the IMCG (Matthias Krebs), the national NGO Tchaobi (Izolda Matchutadze) and the administration of the Kobuleti Nature and Managed Reserve (Rezo Moistsrapishvili) opposed the first proposed road alignment as the road would pass through the mire Ispani 2, through the Nature and Managed Reserve in the East (Fig. 1). Engconsult Ltd. explained that this mistake was due to a miscommunication with the Ministry of Environment Protection and Natural Resources of Georgia, as at the same time the maps were provided to Engconsult, the boundaries of the reserve were changed by the Ministry. Thus the first road alignment was out of question and another proposal was presented (Fig. 1) in June 2009. In the new plan the road was still very close to the Nature Reserve (250 m) and Managed Reserve (100 m). The vicinity of the road still put the mire at risk by pollution. Mires, and particularly raised bogs, are very sensitive against pollution by nitrogen (Heijmans 2000, Lamers 2001, Limpens 2003) and traffic NOx emissions are a major anthropogenic source. Negative effects were also expected by the potential noise pollution as the Nature Reserve is a designated Ramsar site of international importance for breeding and migrating birds, which are very sensitive to noise disturbance. Also prospects of the development of ecotourism seemed to be reduced by the second proposed road alignment.

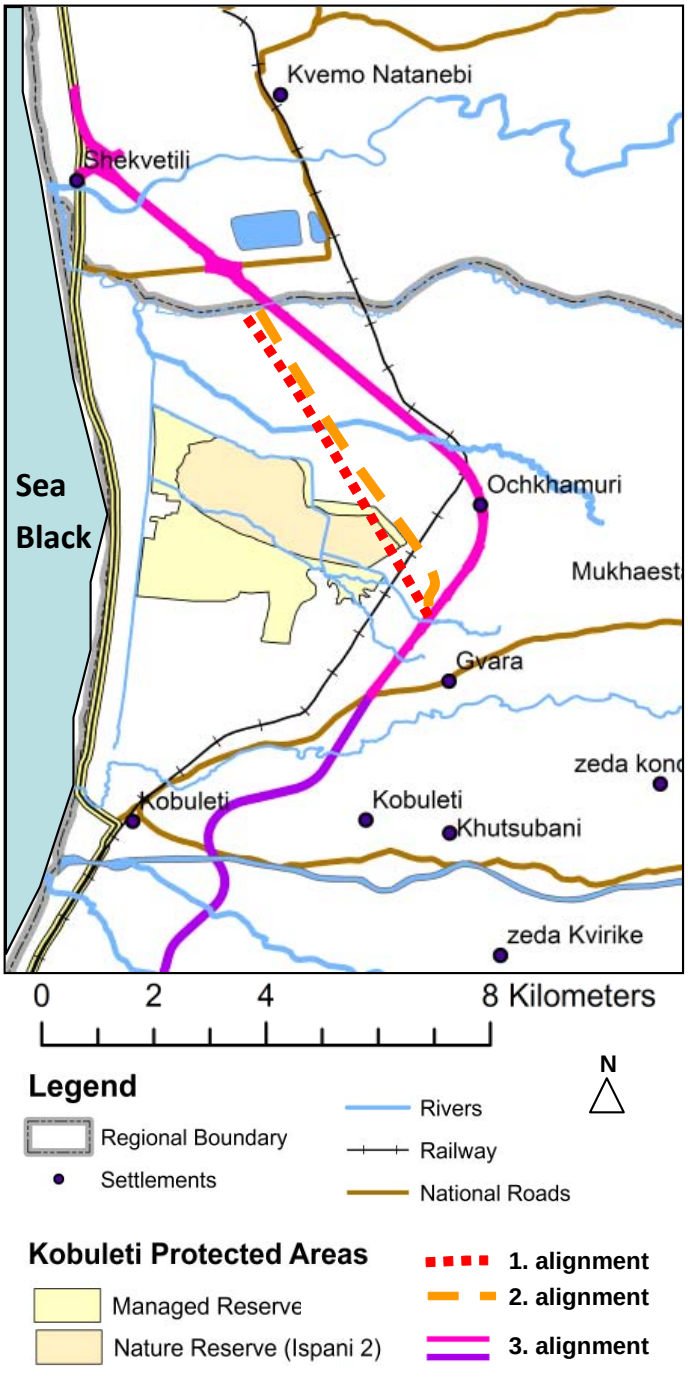

Figure 1: Map with the location of the mire Ispani 2 within the Kobuleti Protected Area and the different proposed alignments of the road construction of the Adjara Bypass around Kobuleti. Map modified after the EIA report, Roads Department of Georgia, www.georoad.ge/?que=geo/projects&info=963.

IMCG and Tchaobi stated that due to the national and international importance of the mire Ispani 2 a careful consideration of the location and associated damaging effects of the road construction and operation on the mire is essential. The second

proposal would only be acceptable with adequate measures to reduce risks of atmospheric pollution, noise and water level changes to the mire. The recommendation was to displace the road to a larger distance from the Nature Reserve, following the railway more closely and crossing it to the West much further northwards than proposed before. A detailed set of comments and suggestions for improvement was provided in writing to the ADB Bank by IMCG, Tchaobi and the ICZM Focal Point for Georgia, Mamuka Gvilava, and separately by the Georgian NGO Green Alternative.

An updated EIA was presented by the Roads Department of Georgia on 12 November 2010 (www.georoad.ge/?que=geo/projects&info=963) with the road shifted east of the existing railway, further from the mire Ispani 2 (Fig.1). This new alignment decreases the risk of noise pollution and negative water level changes substantially as well as the risk of atmospheric eutrophication. Above risks and possible effects on the mire will have to be analysed and monitored once the road is operational. The updated EIA report is only available in Georgian and still needs updating with respect to these requirements.

The successful realignment of the road to minimise its impact to the Ispani 2 mire shows the importance and strength of the collaboration between international and national NGOs, and institutions from the governmental sector, which have to involve themselves actively in the process of decision making, in that case with regard to environmental impact assessment process.

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Bad news from Kolkheti (Georgia/Transcaucasia)

by Matthias Krebs, Izolda Matchutadze, Mamuka Gvilava

Beside the good news mentioned in the previous article, there are also alarming developments in the Central Kolkheti Lowlands that affect the Kolkheti National Park (Ramsar Site N°893, Fig. 1). Main parts of the Kolkheti mires are situated in the National Park with a high diversity in hydrogenetic mire types including lithogenous water rise mires and flood mires and a diverse vegetation with many endemic species (Joosten et al. 2003).

Major efforts are undertaken by the Government of Georgia to develop within the next 1½ years the new Anaklia-Zugdidi 'Free Touristc Zone'. Incentives to attract investors include gratis construction by the government of fresh water supply to the resort, tax exemption for 15 years, coastal lands being handed over for free and even gratis casino licenses for hotels with more than 100 rooms (see economy.gov.ge/?category=4&lang=eng&item=403)!

The future boulevard has been designed already by Spanish architects (CMD Ingenieros, see www.cmdingenieros.com).

The resort will be situated along the Anaklia coast from the river Enguri to near the northern border of the Kolkheti National Park at the mouth of the Churia River. In absence of buffer zones, the resort may have a strong negative impact on the Strict Nature Protection Zone of the Kolkheti National Park with its Kolkheti relict forest dominated by *Quercus hartwissiana, Pterocarya pterocarpa, Buxus colchica*, alder carrs and open water rise mires.

Moreover, construction of a highway along the seaside is planned to connect Poti and Anaklia (Fig. 1) (www.investingeorgia.org/upload/file/Anaklia_Project_Description1.pdf). This highway has to cross the Kolkheti National Park over ~10 km destroying the protected and only remaining natural coastal sand dunes, destroying fresh water habitats with rare and endangered plant species like *Salvinia natans, Trapa colchica, Trapa maleevi* and affecting several mire sites. Concrete information about the road construction is not yet available, only its approximate alignment (see Fig. 1, prepared by ICZM Focal Point for Georgia based on personal communication). Sources have informed us that this road development is also included in the Road Corridors Development Program financed by the loan of the Asian Development Bank (see previous article).

Recently, a draft document for the Environmental Impact Assessment was worked out, but the report is still not available. On 24 January 2011, a meeting of the Agency of Protected Areas (Ministry of environment protection and natural resources of Georgia) was held with two experts from the EIB (European Investment Bank) to discuss the plans. The two experts recommended inviting external experts.

Even more alarming plans than the road development was recently revealed in news messages in local media (in Georgian: http://tinyurl.com/4wxtccn).

Apparently, plans exist to develop a new Black Sea port in the Kolchis area. Exact information is yet unavailable, but as Anaklia and the right bank of Khobistskali are mentioned, the port is likely situated right inside the Kolkheti National Park (Fig. 1, south of Anaklia). As not much is known about this development, it looks very similar to the assailed construction of the Kulevi oil terminal with its violations of Georgian law, the damage of peatlands of the Kolkheti National Park, and the failing environmental investigations (Kochladze 2002, Rimple 2005, Salathé 2005). The oil terminal was authorized by a Presidential Decree (E. Shevardnadze) in 1999 (Krebs & Joosten 2006). It is now reported that a similar Presidential Decree (M. Saakashvili) issued in 2010 endorses development of the port by the same stockholders who were behind the Kulevi oil terminal (*cf.* Krebs & Joosten 2006). The highway from Poti to Anaklia may be presumed part of this large scale development plan along the sensitive coastal area.

Information must be made available with regard to the detailed plans. Again the work of national and international NGOs and governmental institutions is important to scrutinise and monitor the developments and to take part in the decision making process. The latter may be quite a challenge as the actions and decisions are non-transparent and information supply is largely absent even towards governmental institutions.

The situation is serious when the administration of a Nature Reserve finds out by accident through the newspaper about a public consultation on an important issue like road construction affecting the Reserve while the sticks delineating the road are already put in the ground of the Reserve. The current plans for a new port or the highway from Poti to Anaklia have to be thwarted to preserve unique coastal dunes and peatlands of national and international importance. The threat remains real so long as short sighted and obscure economic interests continue to have higher priority.

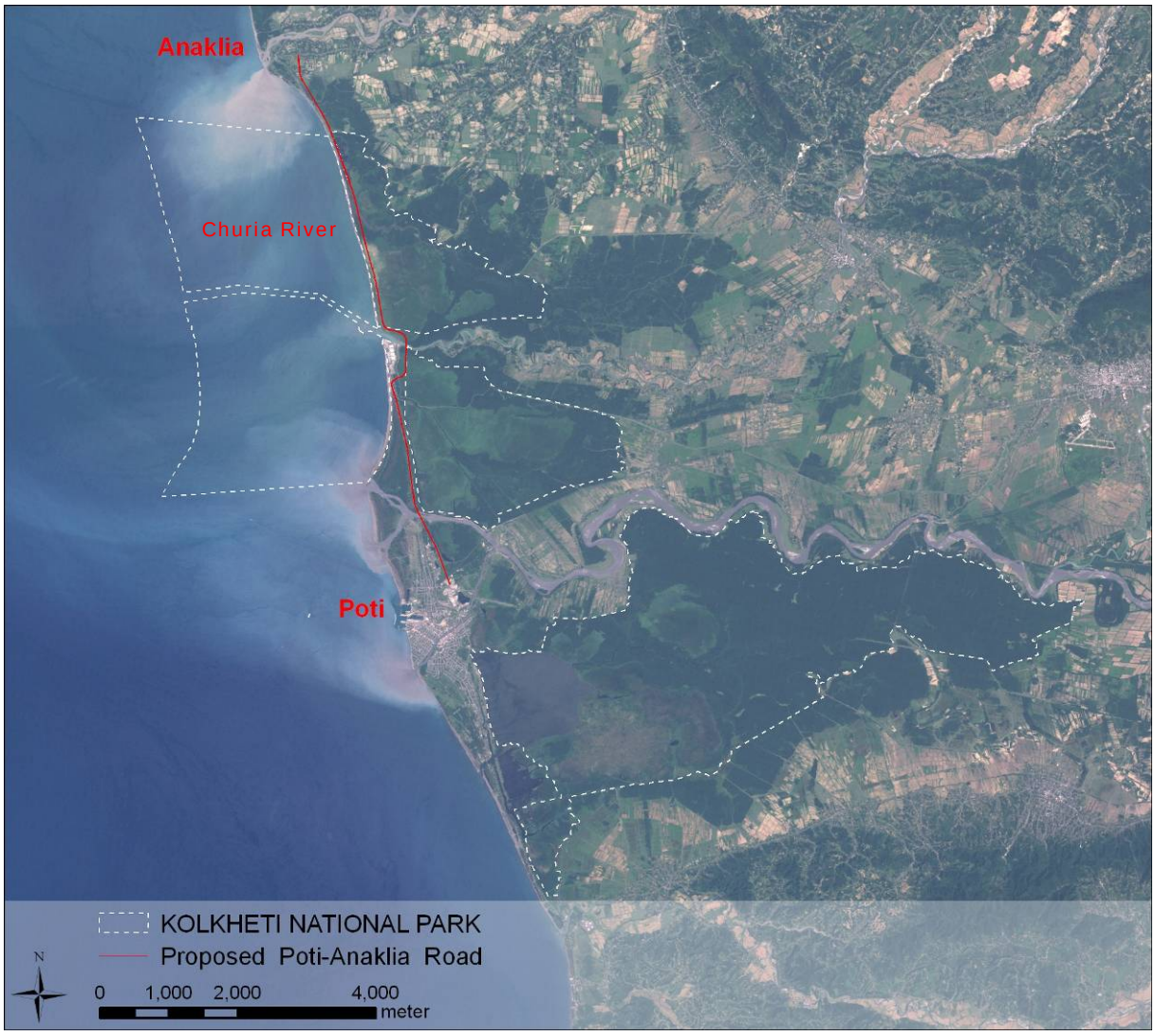

Figure 1: Location of the Kolkheti National Park in the Central Kolkheti Lowlands and proposed coastal road development from Poti to Anaklia "Free Touristic Zone".

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Wise use of peatlands in the region of Magellanes, Chile

by Rodolfo Iturraspe

"Environmental, juridical and commercial basis for the wise use of peatlands in the Region of Magallanes, Chile" is the name of the new project started in September 2010 in Punta Arenas. The project is managed by the National Institute of Agricultural Researches (INIA Kampenaique,)

The Chilean Region of Magallanes

Last November, researchers from Ushuaia (Argentina) and Punta Arenas met to discuss cooperation on matters dealing with mires hydrology, ecosystem values and policies for management and conservation.

In November 19, a workshop was held in Punta Arenas with participation of scientists and regional authorities dealing with the environment, mining, agriculture, forest and protected areas. Rodolfo Iturraspe, (Argentina) as member of the IMCG EC explained IMCG activities on conservation and wise use and described the experience in Tierra del Fuego, Argentina. He pointed out recent advances in mire management with development of policies for mire protection after issuance of the IMCG Ushuaia Statement.

The Chilean project includes experiments on moss regeneration and mire restoration with the advise of the University of Laval, Canada. These studies are the first of their kind in Southernmost South America. The importance of sharing knowledge was emphasized, particularly considering there are only few mire ecologists working in the region.

Mire types in the Chilean Region of Magallanes are very diverse. Even close to the city of Punta Arenas, at the border between the native *Nothofagus* forest and the semiarid steppe, mires are found. Mires present a fragile equilibrium here, because of the dry and windy summer climate.

Although the mires provide important functions with respect to water supply for the city and in flood regulation, their vicinity to the city and easy accessibility creates demand for mining of these pristine components of the original regional landscape.

Researchers from INIA Kampenaique working on the experimental site for restoration in San Juan Mire, close to Punta arenas

The distribution of mires is strongly related to the strong W-E climate gradient in Chili. Main peatland areas are found in the western islands, along the Magellanic Moorland, and vegetated by *Astelia*,

Donatia, *Marsippospermum*, and evergreen *Nothofagus betuloides* forest which includes *Drymis winteri*.
More accessible mires are located close to Puerto Natales, where mountains, lakes, fjords and valleys make up an impressive landscape. Like in Tierra del Fuego moss-dominated bogs prevail here and occur together with Cyperaceae fens.


San Juan Sphagnum bog near Punta Arenas

In Chile, as well as in Argentina, peatland use is regulated by the mining law, but new environmental regulations provide useful tools to the Government in terms of planning the use of mires and protecting those that present high values or provide significant environmental functions. Authorities, specialists and also peat extractors present in the meeting agreed on the importance of planning the wise use of mires based on a full evaluation of their values and functions.


Slopping fen near Puerto Natales

Biofuel plantations on peat excluded from CDM support

Plantations on peat soils will no longer be supported by the Clean Development Mechanism (CDM). This decision was taken by the CDM Board as a result of concerns expressed by Wetlands International, IMCG and CDM-Watch, who alarmed the Board that CDM projects on peat soil directly result in very high greenhouse gas emissions from drainage for oil palm cultivation.
In 2009, the CDM Executive Board approved a methodology that gave CDM credits to biodiesel plantations on so called 'degraded lands' in developing countries (IMCG Newsletter 2009, 3/4). The CDM allows industrialized countries under the Kyoto Protocol to reduce their emissions via projects in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, which can be counted towards meeting Kyoto targets. The proposed methodology was meant to stimulate sequestration of carbon via replanting of degraded, devegetated land areas with renewable energy crops as alternative for conventional diesel.
In practice, the methodology gave an additional financial boast to new palm oil plantations on the logged peatswamps in Southeast Asia. These 'degraded' lands still contain large amounts of carbon, however, that will be rapidly released upon drainage for plantations.
In September 2010, the CDM Executive Board decided in its 56th meeting to repair the adverse incentive to develop plantations on peatlands.
Still, the CDM methodology for Afforestation and Reforestation does not yet address many other important environmental and social issues connected to biofuels, such as indirect land use impacts of biofuel production.

Wet, wild, wonderful:
New Postcards and Posters promote Mire Conservation

A new series of IMCG postcards was printed just in time for the IMCG field symposium in summer 2010. The eight postcards highlight mires on all continents and address important mire conservation issues on the backside. The featured photographs were graciously provided by IMCG members. We received more than hundred pictures to choose from; a selection of the best photographs can be viewed on the IMCG web page.

The themes covered by the IMCG 2010 postcard edition range from a foggy autumn morning in Nigula bog (Estonia) to unexpected peat swamps in Peruvian Amazonia, from patterned bogs in Canada to Elephant pathways through a South African mire. The pictures emphasize the importance of mires for biodiversity with a wonderful sun stripped orchid occurring in New Zealand's bogs and a cool Aquatic warbler breeding in sedge fens in Eastern Europe.

The selection with examples from all continents points at the important functions of mires for global climate control, water regulation and biodiversity. The pictures also address the "soft" ecosystem services offered by mires to society, including information and transformation functions. These values are often difficult to quantify, but can be of high importance to communities. With the new postcards IMCG raises awareness of the totality of their functions and services.

In addition to the postcards, we have produced an IMCG poster with 12 pictures from the member contributions. The poster entitled "Peatlands need water to live." is a contribution to the International Year of Biodiversity. The poster is available in English, French, German and Spanish and can be downloaded as a pdf file in small (A4) and large (A0) paper size from the IMCG web
http://www.imcg.net/cards/cards10/posters10.htm

Regional News

News from Russia
Two jubilees

Last year Russian peatland science celebrated two remarkable jubilees.

In March 2010, Academy member Stanislav Vompersky had his 80th birthday. We all know Prof. Vompersky as an active specialist in mire hydrology, peatland forestry and carbon balance. We often meet Prof. Vompersky in field excursions, seminars and workshop and wish him many fruitful years to come.

Stanislav Vompersky during Workshop in August 2009 in Central Forest Nature Reserve

In September 2010 Tatyana Yourkovskaya celebrated her jubilee. It is hardly possible to follow this beautiful lady in mires, to compete with her in her efficiency in work, in the sheer amount of publications and contacts in the scientific world, both in Russia and abroad. For all us Prof. Yourkovskaya is an example of a truly devoted scientist and teacher.

Tatiana Yourkovskaya, Galina Elina, Marina Botch. Nigula 1989.

More pictures:
http://www.peatlands.ru/?file=news.php&page=580

Mire science network

Tatyana Yourkovskaya is also at the heart and centre of the Russian mire science society. She leads the Mire Section of the Russian Botanical Society with Viktor Smagin as secretary. In 2010, the Mire Section held three meetings: in February the book "Hydrology of paludified territories of the permafrost part of West Siberia" was presented by Prof. Sergei Novikov.

In March 2010, the meanwhile traditional, third "Mire Science Readings" devoted to Elina A. Galkina were held. In October we met to celebrate Tatyana Yourkovskaya's birthday and launch the proceedings of the First Mire Science Reading devoted to E.A. Galkina: "Research problems and goals in modern mire science in Russia", published with support of Wetlands International.

Not only botanists and related scientists are interested in mire science. An interesting mix of scientists has devoted itself to Russian mire in 2010. The long term work of the Russian Peatland Project of Wetlands International in collaboration with Dr. Andrey Sirin from the Russian Academy of Sciences and Dr. Yury Plusnin from the Higher School of Economy has led to a merger of peatland science with sociology and psychology. A group of philologists from Tver State Classic University, in cooperation with Wetlands International, organized a seminar on "Russian mires between nature and culture". All possible (and impossible) citations of mires and peat in Russian culture (poetry, fiction, painting) have been analyzed by a group of very active culturologists, finding unexpected aspects and visions, including relationships to gender. A good partnership has been established for cooperation on the changing mentality of people towards mire and for developing a positive attitude in Russia. Proceedings funded by Wetlands International will soon be published. We also prepared a beautiful 2011 calendar with reproductions of paintings and poetry by famous Russian artists.

Wise or unwise use processes

Peatlands have become an object of interest to several influential groups in Russia in discussions on land use, the energy sector and horticulture.

We have already reported in the IMCG Newsletter on the workshop on peat use as an alternative energy source in Kirov in the beginning of June 2010. The contradictive outputs of the meeting were on the one hand an awareness on the need of clear regulations with respect to peatland use and on the other hand the straight recommendation to promote peat as a 'renewable' source of energy.

A follow-up workshop was held in 5-7 July in Vladimir. The key issue was agriculture. Around 100 experts met to discuss the use of peat and peatlands in agriculture and criteria for sustainability of such use. The proceedings (partly funded by Wetlands International) with English summary will be published soon.

A good workshop was held on "Peatlands conservation and wise use" in the beginning of November 2010. The workshop was jointly organized by the Ministry of Natural Resources and Environment and Wetlands International with

additional partners (Tver Administration, Federal Centre of Geoecological Systems, Institute of Forest Sciences RAS, The Tver State Technical University, The International Peat Institute Tver, The Russian Peat Society, UNDP Russia and the Michael Succow Foundation). The goal of the workshop was to update the Russian Peatland Action plan which originally had been developed and endorsed with wide stakeholder involvement in 2002. The first day of the workshop focused on the federal component and was held in Moscow. The three following days addressed the regional component and were held in Tver. A total of 140 people took part in the meeting. An evaluation of peatlands status and an overview of gaps and urgent problems as well as proposals for the new action plan were put forward in a resolution.

Peat fires

The 2010 episode of wildfires in the central part of the Russian Plain reached its maximum in the beginning of August. After the 2002 fires, a comprehensive analysis of causes and drivers was carried out. All problems have been identified: abandoned milled peat and agriculture drained areas, lack of mechanisms to stimulate rewetting, lack of methods, lack of legislation. After 2002, we implemented pilot projects to demonstrate the gaps in the system. In spite of all the insights and efforts, we find ourselves in the same situation in 2010, with practically no peatlands rewetted by the state.

The fires brought a lot of attention for peatlands and for the work of NGOs and the scientific community. As in 2002, peatlands were in the limelight of the mass media and we had more and more opportunities to explain peatlands to a wide public. On the downside, the fires also raised a slew of crazy project ideas that generally lack insight and understanding of the consequences of rewetting. Different players forced themselves in the arena, who were only interested in the potential funding and we may expect more ineffective projects.

We will see.

All Russian news provided by Tatiana Minaeva

News from Belarus: Development of the Pripyat-Polesye

The State Program for social and economic development and integrated use of natural resources of the Pripyat Polesye in 2010-2015 was approved in Belarus. The corresponding decree No.161 was signed by Alexander Lukashenko on March 29.

The Program is aimed at providing sustainable social and economic development of the Pripyat Polesye based on integrated use of natural resources, increase in investment outflow, maintenance of conditions for restoration of natural resources potential and creation of favorable living conditions.

The program measures are aimed at development of the social sphere, enhancement of reclaimed land use efficiency, prevention of land and agricultural landscape degradation, development of agriculture and fishery, sustainable use of water resources and prevention of water resources from depletion and contamination. The Program does not include any measures aimed at nature protection.

For peatlands, the program means reconstruction and recovery of reclamation works and works to improve drainage. The Program does not stipulate any measures related to withdrawing from practical use or shifting inefficient use of lands.

The new program is a set-back for the further development of the large-scale rewetting of degraded peatlands currently underway.

News from Finland: Boreal Peatland Life

The largest EU LIFE Nature project in Finland started in January 2010. The project, led by the Natural Heritage Services of Metsähallitus, aims at restoring nearly 4300 hectares of various kinds of peatlands. The five year project includes 54 Natura 2000 sites across Finland.

Finland has an international responsibility for maintaining the diversity of mires in the northern boreal zone. The diversity of mires in Finland is the largest in the world compared to any other similar sized area. The large scale ditching of mires for forestry purposes in the latter part of the 20th century has had an immense degrading impact on the natural values of mires, bogs and fens.

The main aim of the project is to restore the natural hydrology of the mires by filling in and blocking the ditches and by clearing trees to recreate the landscape as it was prior to the ditching. Various mire biotopes such as aapa mires, concentric bogs, herb-rich fens as well as spruce mires and pine bogs will benefit from the restoration measures. Another key aim of the project is to increase the public awareness on the natural values of mires and to provide personal experiences from mires.

The total budget of the project is approximately 6.7 million euros of which the European Commission funds 50%. The Natural Heritage Services of Metsähallitus implements the project in collaboration with the Centre for Economic Development, Transport and the Environment for Central Finland (ELY Centre for Central Finland) and the Department of Biological and Environmental Science at the University of Jyväskylä.

www.metsa.fi/borealpeatlandlife

News from Norway: Sphagnan research

The late professor Terence J. Painter (Department of Biotechnology, NTNU, Trondheim, Norway) worked for many years on the preservative properties of peat

and *Sphagnum* mosses. He concluded in a series of research articles that these properties could be ascribed to a special sugar, called 5-KMA. The sugar was part of the cell-wall pectin, which Painter termed 'sphagnan'. Pectins are found in cell walls of all plants, but 5-KMA seemed to be uniquely found in *Sphagnum* mosses and in peat derived from *Sphagnum*.

5-KMA apparently contained a reactive carbonyl group, enabling reaction (covalent linkage through Schiff base formation) with amines, including protein and ammonia. This was supposed to contribute to the 'tanning' observed in peat bodies. It would also react with enzymes, thereby inhibiting microorganisms relying on extracellular enzymes.

In the period 2002-2010 several research projects were carried out at NTNU in collaboration with the Norwegian School of Veterinary Science, Oslo. The purpose was to explore and utilize the properties of sphagnan in food preservation, and to characterize the sphagnan molecule and its reactions with amines. Much of the work was carried out on purified *Sphagnum* holocellulose (HC). HC is essentially the intact cell walls of *Sphagnum* following removal of waxes, fat, proteins, pigments etc., whereas the sphagnan and the 5-KMA are intact.

Initially, a series of experiments confirmed that HC would conserve biological materials, including long-term preservation of Zebra fish, which was used as a model. Purified (soluble) sphagnan was also found to be antimicrobial. Also, salmon fillets placed on 'pads' made of HC had less odour and less bacterial growth compared to control pads made of cellulose.

However, attempts to verify the existence and proposed structure of 5-KMA failed. In fact, HC did not take up ammonia by reaction with carbonyls. Neither did it react with proteins differently from other pectins, which on the basis of their polyanionic properties generally form polyelectrolyte complexes with proteins in a strongly pH-dependent manner. Many other polysaccharides behave in the same way. The analysis used by Painter to identify and quantify 5-KMA was in fact shown to contain a methodical flaw. However, a small amount (ca. 2%) of reactive carbonyls was indeed detected by novel methods (SEC-MALLS combined with carbonyl labelling or NMR of OPD-reacted sphagnan). This amount is one order of magnitude lower than the value originally put forward by Painter (ca 25%), and plays almost certainly no significant role in the observed preservation.

How could the preservative properties be explained when the 5-KMA hypothesis failed? We returned to the question of acid-base properties of sphagnan and HC, and found that the preservation was only observed when the HC, the sphagnan or the moss itself was – intentionally or non-intentionally – transferred to the acidic form. The basis for this property is the high content of galacturonic acid in the HC pectin. Thus, the conservation effects observed in our experiments can be explained by acidification alone.

As the early, and as we now know, erroneous conclusions supporting the 'sphagnan' or '5-KMA' hypothesis were published in the scientific literature and at conferences, the ideas spread to other related fields. In particular, the new theory was adapted to provide a new explanation for the preservation of 'bog bodies', and has already been presented to the public audience.

In view of the very recent rejection of the '5-KMA' hypothesis the 'conservation community' is encouraged to revise or update their information material. As a general recommendation, references to the 'sphagnan' theory should simply be removed.

The remarkable preservation properties of peat and *Sphagnum* remain a challenging area. Hopefully, future research can shed light on the mechanisms involved.

Source: http://www.biotech.ntnu.no

News from the Netherlands: Hans Esselink award

In October 2010, peatland ecologist Wilco Verberk received the first Hans Esselink award for his creative efforts in research and conservation. Verberk's research focuses on the relationship between autecology of animal species and their distribution in the landscape. His work on aquatic fauna provided an ecological explanation for the effects of restoration efforts in dutch raised bog remnants. The knowledge gained allows for a substantial increase in the efficiency of restoration measures. Currently, Verberk works at the University of Plymouth (UK).

The Hans Esselink award is a shared initiative of the Stichting Bargerveen, SOVON, RAVON, FLORON and the mammal society. Stichting Bargerveen is largely built on the ideas of Esselink, who was its director until his untimely death in 2008. The work of active IMCG member Esseling focused on developing science based practical nature conservation.

News from Canada: Boreal peatlands in Manitoba

The Manitoba government held a Workshop, on 29 November 2010 to discuss the development of a peatlands policy for the province. The goal of the workshop was to establish the current state of knowledge surrounding Manitoba's Boreal peatlands. The session was the first step towards the development of a draft Manitoba Peatlands Stewardship Strategy.

Objectives of the workshop were:

- To understand what is known and has been learned about the ecological and cultural values of Manitoba's boreal peatlands, as well as globally and across Canada.

- To determine what activities or disturbances can have an impact on the ability of Manitoba's boreal peatlands to store carbon and provide other cultural and ecological goods and services, and
- To identify practical mitigative, conservation and adaptation measures and strategies that could be considered for inclusion in a draft Manitoba Boreal Peatlands Stewardship Strategy.

The 30 participants represented government, environmental interest groups, the aboriginal community, scientific community and industry.

News from Georgia: Honorary Doctorship for Hans Joosten

On October, 2, 2010 Shota Rustaveli State University in Batumi has bestowed a Honorary Doctorship to Hans Joosten for his efforts in studying, conserving and teaching about the peatlands of Georgia.

News from the USA: Everglades put on 'danger' list

The United Nations has added the Everglades National Park to the List of World Heritage in Danger. This symbolizes both the United States' commitment to the restoration of the Everglades ecosystem and the Obama administration's efforts to restore the role of sound science in decision-making.

The Park has been on the World Heritage List since 1979. After Hurricane Andrew, UN committees placed the Park on the List of World Heritage in Danger in 1993. The Park was removed from the danger list in 2007 at the request of the Bush administration. The Obama administration asked the committee to put the Park back on the list, which it did July 30.

Placing the Everglades National Park back on the List of World Heritage in Danger provides incentives to develop criteria, such as the completion of specific ecosystem restoration projects that will serve as the basis for removing the Park from the danger list.

News from Indonesia: Options for carbon financing

A workshop on Options for Carbon Financing to Support Peatland Management was held in Pekanbaru, Riau Province, Indonesia on 4-6 October 2010.

The workshop was attended by more than 100 representatives from government agencies, research institutions, private sector and NGOs from 14 countries mainly from the ASEAN region. It was organised by ASEAN Secretariat and the Global Environment Centre (as Regional Project Executing Agency) in partnership with the Ministry of Environment of the Government of Indonesia and the Provincial Environment Board of Riau Province. The workshop was held to support the implementation of the ASEAN Peatland Management Strategy 2006-2020 as part of the ASEAN Peatland Forests Project (APFP) and was supported by the International Fund For Agriculture Development (IFAD)/ the Global Environmental Facility (GEF). The Workshop was officiated by representatives of the Minister of Environment in Indonesia and the Governor of Riau Province.

Expert presentations and working groups focused on policies and opportunities related to carbon financing for peatlands; experiences and case studies of developing carbon finance projects; and methodologies for assessment of carbon emissions and stocks.

The workshop summary report and recommendations can be found on the APFP website www.aseanpeat.net at http://tinyurl.com/66vzzrm

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

The book **Mires and Man** – the Proceedings of the 1992 IMCG Symposium, including a detailed account of the origins of the Swiss landscape, environment and culture has been made available in digital form. A PDF (30MB) is available here: http://www.wsl.ch/dienstleistungen/publikationen/pdf/420.pdf

UNEP-WCMC publications and reports

Since its creation in 1979 WCMC has produced well over 1500 books and major reports. UNEP-WCMC has selected 380 of the most important books and reports from this collection, and has worked with the Biodiversity Heritage Library to make these freely available online.

These documents include a significant body of information of value to audiences around the world ranging from researchers to the general public, and from educators to decision-makers. Items are available in 9 different formats, for maximum accessibility, and are published according to open access standards in a forum which welcomes and encourages both use and contribution, while respecting attribution rights.

The UNEP-WCMC archive can be found at http://www.archive.org/search.php?query=wcmc

Schwill, S., Haberl, A. & Strauß, A. 2010. Greenhouse gas emissions of peatlands – Methodology for the assessment of climate relevance – case study Zehlau peatland. Michael Succow Foundation. 19p. (in English and Russian)
This brochure presents a method of assessing greenhouse gas fluxes from peatlands, using vegetation as a proxy. To illustrate the method, the Zehlau peatland in the Kaliningrad region is presented as a case study.
PDF available here: http://tinyurl.com/zhlau

Iturraspe, R. 2010. Las turberas de Tierra del Fuego y el Cambio Climático global. Wetlands International, 26 p. (in Spanish)
This brochure provides a synthesis of ecosystem functions of the peatlands of Tierra del Fuego (Argentina) with special emphasis on mitigation of and adaptation to a changing climate.
PDF available here: http://tinyurl.com/turbtdf

Sienkiewicz, J. 2008. Ramsar sites in Poland. Institute of Environmental Protection, Warsawa, 70 p.
With maps and information on the Ramsar sites of Poland, many of which contain peatlands, often even substantially.

Werpachowski, C. 2009. Storeczyki Biebrzańskiego Parku Narodowego i Polski Północno-wschodniej. Biebrzański Park Narodowy, Goniądz, 70 p.
Colourfull booklet about the orchids of the Bierbza.

Ministery of the Environment and National Fund for Environmental Protection and Water Management 2008. Strategy and Action Plan for Wetland Conservation in Poland for the years 2006 – 2013 with Cost Calculation. Institute of Environmental Protection, Warsawa, 59 p. (also available in Polish).
With overview of national legislation and international commitments, institutions involved, state and environmental role of wetlands, threats, goals and implementation guidelines.

2010 Shared Definition of Everglades Restoration
After ten years of ongoing monitoring and research on the south Florida ecosystem, a large body of new scientific information is now available. The 2010 Shared Definition of Everglades Restoration is aimed at better defining the functional attributes of a restored ecosystem in order to provide enhanced information for planning, implementation and operation of restoration projects.
Downloadable under: http://www.evergladesplan.org/shared-definition/sd_2010.aspx

Ambrósz, L., Lacika, J., Ondrejka, K. & Šubová 2009. Protected landscapes of Slovakia. DAJAMA, Bratislava, 128 p.
With information on the Slovakian Natura 2000 system.

Cmielewski, T.J. (ed.) 2009. Ekologia krajobrazów hydrogenicznych Rezerwaty Biosfery "Polesie Zachodnie". Uniwersytet Prsyrodniczy w Lublinie, Lublin, 344 p.
Overview of major environmental conditions, characteristics (climate, hydrology, hydrochemistry, peat stratigraphy), natural values (plankton, wetland flora and vegetation, fishes, birds), land use developments and scenarios in the trilateral transboundary West Polesie Biosphere Reserve (Poland, Belarus, Ukraine) with focus on the Polish part. In Polish with extensive English summary and extensive reference list.

Cmielewski, T.J. & Sławiński, C (eds.) 2009. Nature and landscape monitoring system in the West Polesie region. University of Life Sciences in Lublin, Lublin, 269 p.
With a biography of Stanisław Radwan (pioneer of landscape ecological wetland research in West Polesie) and contributions on biosphere reserves in Belarus and environmental monitoring (remote sensing, 137Cs in plants, climate, water, phytoplankton, elks, land use, settlements, tourism) in Poland, Belarus and Ukraine, with focus on the Polish part.

Трансграничные водно-болотные угодья России и Украины в долинах рек Десна и Снов / Под ред. Ю.П. Федотова. – Брянск, 2010. 84с. (Transboundary Russian-Ukrainian Wetlands in the Desna and Snov River Valleys. 2010. Yu.P.Fedotov, ed. - Bryansk. 84 pp.)
The book addresses issues of transboundary wetland conservation and migrating water bird studies in the Desna River floodplains. It contains a description of physical features of the border areas between the Bryansk (Russia) and the Sumy and Chernigiv (Ukraine) Regions, addresses major wetland types, rare and endangered species and existing and proposed nature protection areas. Information on the most important wetland sites is presented in the Ramsar Convention format. Results of water bird countings carried out in 2004 and 2010 are discussed in four articles.
Downloadable under: http://tinyurl.com/Desna-Snov

Q&A on AFOLU, 'wetland management' and the road to land-based accounting
Better management of terrestrial carbon stores (reservoirs) and fluxes (emissions and removals) can make a substantial contribution to reducing atmospheric greenhouse gas concentrations. This Question & Answer booklet aims to give insight into

the opportunities and obstacles with regard to reporting and accounting for changes in carbon stores in, and anthropogenic greenhouse gas fluxes from, terrestrial ecosystems. Special attention is paid to 'wetland management', a proposed new accounting activity under LULUCF for which huge emissions reduction potentials are readily available. This Question and Answer booklet has been developed for the UN-FCCC negotiations on land use, land-use change and forestry (LULUCF) and was produced by Wetlands International and the University of Greifswald.
Download PDF: http://tinyurl.com/WI-QA-AFOLU

Wetlands International Malaysia 2010. A Quick Scan of Peatlands in Malaysia. Wetlands International Malaysia, 85 p.

Malaysia, comprising the regions of Peninsular Malaysia, Sabah, and Sarawak, supports some of the most extensive tropical peatlands in the world. Malaysia's peatlands mainly consist of domed peat swamp forests. The peatlands of Malaysia are highly threatened. Vast areas have been cleared, burnt, and drained for economic development and few of Malaysia's peatlands remain intact.
This report presents the first national assessment of peatlands in Malaysia. It identifies remaining peatlands of high conservation value, and presents preliminary recommendations toward the development of a national strategy for Malaysia's peatlands. The report is preliminary in nature: data are limited or unavailable for many areas, and available data range from two to nine years old. In this respect the report highlights the need for new data and provides a framework for more detailed studies in the future.
Download PDF: http://tinyurl.com/WI-Mlsia

McBride, A., Diack, I., Droy, N., Hamill, B., Jones, P., Schutten, J., Skinner, A. & Street, M. (Eds.) 2010. The Fen Management Handbook. Scottish Natural Heritage, Perth. 354 p.

Handbook produced to improve understanding of fens and how they function, to explain why fens need management, and to provide best practice guidance. Case studies are included at the end of most sections as practical examples of the principles and techniques outlined in the text. The handbook is aimed at anyone interested in fens, or who might become involved in fen management, creation or restoration from a practical, policy or planning perspective. With case studies. With special attention to key points and good practice and to activities which might be legislatively controlled or which might potentially damage the interest of fens.
Download: http://www.snh.gov.uk/docs/C257398.pdf

Anderson, R. 2010. Restoring afforested peat bogs: results of current research. Research Note UK Forestry Commission, 8p.

The UK Forestry Commission published this Research Note (FCRN006) to present results of current research. In the UK, research is currently being carried out to determine the feasibility and methodology for restoring afforested bogs. Two experiments were set up to compare a range of methods for managing trees and drainage. In the blanket bog experiment, treatments that involved both felling trees and damming plough furrows were more successful than others in terms of raising the water table. Bog vegetation recovered rapidly in the felled treatments, particularly those with furrows dammed. In the lowland raised bog experiment, the water table rose dramatically in all treatments. Only during a prolonged dry summer was there a difference between treatments, the water table falling deeper in the whole-tree removal than in the fell-to-waste treatment, with conventional harvesting intermediate. Bog vegetation recovered best in the whole-tree removal treatments and least well in the fell-to-waste treatments. Felling is necessary for restoring afforested bogs, but removing lop and top is not. Damming plough furrows can help to restore blanket bog but damming main drains may suffice on lowland raised bogs. Damming furrows is ineffective if the peat is severely cracked. Tree seedlings often colonise bogs undergoing restoration – removing brash mats after harvesting and periodic maintenance should reduce this problem.
PDF: http://www.forestry.gov.uk/fr/INFD-7J5E7F

Seppälä, J., Grönroos, J., Liski, J., et al. 2010. Climate impacts of peat fuel utilization chains – a critical review of the Finnish and Swedish life cycle assessments. The Finnish Environment 16/2010, 122 p.

From the abstract: lively debate in Finland and Sweden on the climate impact of peat fuel utilization. The aim of this study was to clarify the contradictions between the Finnish and Swedish studies and provide a better basis for energy policy decision-making by summarizing the recent scientific knowledge about the climate impacts of peat fuel utilization chains based on life cycle assessments (LCA). A starting point for this study was to carry out a critical review of Finnish and Swedish life cycle studies of the climate impact of peat fuel utilization chains.
The time perspective of the climate impact calculations in the peat fuel LCAs was 300 years. In practice, a time perspective of over 100 years includes so much uncertainty that such results are not recommended for use in decision making. The use of a shorter time perspective is justified because climate change mitigation requires fast actions over the next decades. Even a reduction of 80-95% in greenhouse gas emissions by 2050 should be done according to the Environmental Council of the EU environmental ministers.
It is important to note that peat utilization chains based on the most common peatlands used for peat extraction (pristine mires and forestry-drained peatlands) cause similar climate impacts to coal

energy utilization. In practice the use of afforestation as an after-treatment option does not change the climate impacts over a 100 years perspective. In addition, biodiversity conservation aspects must be considered in the use of pristine mires.
PDF: www.ymparisto.fi/default.asp?contentid=369485& lan=en

Hölzer, A. 2010. Die Torfmoose SW-Deutschlands und der Nachbargebiete. Weissdorn-Verlag, Jena, 247 p. (in German)
Descriptions and critical comments on *Sphagnum* species, high-quality photographs of the habitus and habitat by H. and K. Rasbach, microscopic photos of all parts of the mosses, illustrated keys in German and English of all species of central, western, and southern Europe, and distribution maps of SW-Germany. For more information: aa.hoelzer@t-online.de.

Schrier-Uijl, A.P. 2010. -Flushing meadows- The influence of management alternatives on the greenhouse gas balance of fen meadow areas. PhD thesis Wageningen, 197 p.
Thesis reporting on the full GHG balances (including CO_2, CH_4 and N_2O) of two agricultural peat areas in the Netherlands: a high intensity managed dairy farm peatland with application of manure and fertiliser and an intensive mowing regime and a peatland managed with low intensity (only mowing) in comparison with an abandoned former agricultural peatland under restoration
Downloadable under: http://edepot.wur.nl/148463

IPS, 2010. Strategy for Responsible Peatland Management
The IPS has finalized its 'Strategy for Responsible Peatland Management'. The final Strategy can be downloaded here:
peatsociety.org/user_files/files/srpmwebversion.pdf

IMCG does not support this document.

UPCOMING EVENTS

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

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

Joint Meeting of Society of Wetland Scientists, WETPOL and Wetlands Biogeochemistry
03 – 08 July 2011, Prague, Czech Republic
http://www.sws2011.com

Third International Field Symposium West Siberian Peatlands and Carbon Cycle: Past and Present
27 June – 5 July, Khanty-Mansiysk, Russia
http://en.ugrasu.ru/international/WSPCC_2011

26th Field days of G.E.T.
03 – 06 July, Auvergne (Central Massif), France
For more information contact Francis Müller at http://www.get.pole-tourbieres.org/rencontres.html

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