# IMCG Bulletin: June 2014

INTERNATIONAL MIRE CONSERVATION GROUP

www.imcg.net

## Word from the Chair

Dear mire friends

My apologies for this later than usual Bulletin: It's the time of the year in South Africa when we do a lot of field work (its winter here and we often do our fieldwork now rather than in the hot summer months); and I guess with the nice summer weather most of our mire friends in the northern hemisphere are also in the field!!. The final preparations for the Belarus 2014 Field Symposium kept some of our main contributors (such as Hans Joosten quite busy). In this regard we wish the organisers and participants a wonderful and enjoyable field symposium in Belarus. We trust all will go well and that deliberations will be successful!! I am sure we will have lots of feedback in the July Bulletin.

Contributions for the IMCG Bulletin can be sent to Piet-Louis Grundling - peatland@mweb.co.za

## Mires and Peat

We encourage our members to support Mires and Peat with your contributions. Contact Olivia Bragg, our editor, if you have enquiries (o.m.bragg@dundee.ac.uk).

Articles in Mires and peat can be accessed at http://www.mires-and-peat.net/

## News received from IMCG Regions

**New Zealand**

Bev Clarkson

**New national policy initiatives to protect wetlands**

The New Zealand National Policy Statement for Freshwater Management 2014 has just been released http://www.mfe.govt.nz/rma/central/nps/freshwater-management.html. This provides significant improvements to managing freshwater and protecting the health of freshwater ecosystems. A central component is the National Objectives Framework (NOF), which consists of national values for freshwater, attributes to be managed for each of the values, a process for setting freshwater objectives for each water body type, and national bottom lines and limits. While NOF attributes have been released for lakes and rivers, NOF development for wetlands has been much more limited.

Researchers from Landcare Research and the Department of Conservation (DOC) have recently progressed the development of NOF wetland attributes to protect the significant values of wetlands. Biotic and abiotic from wetlands throughout New Zealand were analyzed and modelled to identify trends and thresholds between indicators of ecosystem health in wetlands (e.g. wetland condition index, native plant abundance) and proposed NOF physical attributes (e.g. nitrogen, phosphorus).

Five soil nutrient and two other physical variables consistently reflected wetland condition across the three main wetland types: bog, fen and swamp, indicating potential for attribute development. These will be further refined and developed in 2014–2015. Including wetlands in the NOF will embed limits and bottom lines for

different wetland types into national policy plans and requirements to ensure wetlands are managed wisely for generations to come.

**South Africa**

Piet-Louis Grundling

**Wetland conservation on the back foot – The Balamhlanga Wetland, Makhatini Flats**

Ezemvelo KwaZuluNatal Wildlife projects unit (EKW) has been found to be involved in draining and clearing of a wetland in the Makhathini Flats, part of the Maputaland Coastal Plain in the KwaZulu-Natal (KZN) Province in South Africa. This region hosts about half of the country's mires and was visited by the IMCG in the 1004 Biannual congress to South Africa.

Ezemvelo KwaZuluNatal Wildlife is the environmental conservation agency for the Kwazulu-Natal Province in South Africa. Draining wetlands are clearly not a mandate of Ezemvelo KZN Wildlife (EKZNW) in terms of the KZN Nature Conservation Act.

The Balamhlanga Wetland is a substantial in extent and listed as a provincial conservation priority. It is 3km long with indigenous vegetation (predominantly typha - Bulrushes). The presence of peat in the wetland was not confirmed. There is an argument that it is an artificial wetland which is incorrect as this wetland is "was" in a natural state. It is not clear why the draining was commissioned as reasons given vary from the clearing of alien invasive vegetation to preparing the wetland as pasture. Draining comprises the excavation of a massive herringbone drains (see photos below) and the construction of drains and the clearing of the indigenous veg and the top soil layer. The wetland is located next to a sugar cane farming area. Apparently EKW projects are used by Department of Agriculture as they have a quicker procurement process and somehow managed to secure R25 Mil (Euro 2Mil) under the guise to "rehabilitate" the wetland.

This activity also requires a water use licence and an authorisation following a successful consideration of an impact assessment in terms of the National Environmental Management Act. A directive i.t.o. Conservation of Agricultural Resources Act is also required. The KZN Department of Agriculture and EKZNW were unable to produce these authorisations. The Green Scorpions (an environmental law enforcement agency of the national Department of Environmental Affairs) has now issued a directive stopping the draining and have launched an investigation into this debacle.

*Illegal draining of the Balamhlanga Wetland – note the adjacent sugar cane fields. Is this the real objective?*

**Germany**

Hans Joosten

**Sphagnum farming honored in the German 'Land of Ideas'**


The research project 'Sphagnum farming' (Kultivierung von Torfmoos) of the University of Greifswald is one of the winners of the German competition "Great Landmarks in the Land of Ideas" 2014. The competition is this year dedicated to the motto "Innovation across country - Rethinking Rural Areas". 'Sphagnum farming' aims to grow peatmoss as an alternative to peat used in horticultural growing media. In this way Sphagnum farming contributes to the protection of climate and biodiversity and creates new income opportunities in rural areas. The project is implemented in cooperation with peat company Mokura and other partners. The award will be conferred on March 20, 2015 at the Sphagnum farming experimental site in Hankhausen (Germany). More information: http://www.paludiculture.uni-greifswald.de/en/projekte/sphagnumfarming/index.php

## News from all over

**Consultation for Scotland's National Peatland Plan**

On 6 June 2014 Scottish Natural Heritage has launched a Consultation document to comments on Scotland's National Peatland Plan. To obtain a digital copy of the full Consultation Document, Commissioned Reports and Respondee Forms, visit www.snh.gov.uk/climate-change/what-snh-is-doing/peatland-action/national-peatland-plan . The period of consultation runs from 6 June - 12 September 2014. More information: Morag Elliott, email: peatlandplan@snh.gov.uk

**Mark Reed's inaugural lecture on youtube.**

In this talk Prof Mark Reed, Professor in Interdisciplinary Environmental Research at the Centre for Environment & Society Research of Birmingham City University, challenges us to look differently at peatlands, Britain's most overlooked landscape. He explains why all of our lives literally depend on a place that most of us actively avoid ever visiting. He examines how we and our decision-makers have come to know about a huge threat to this place, and how we need a new way of thinking if we are to solve this and many of the other major environmental challenges that the world faces today. Now online: http://www.youtube.com/watch?v=vuoOODcVSls&feature=youtu.be

**First paludiculture biomass energy plant opened in Germany**

'The farm is saved'. This was for farmer Hans Voigt the most important result. 'This is a flagship project', so Minister of Agriculture Dr. Till Backhaus at the opening festivity of the plant on June 26, 2014, 'we have already rewetted 30 000 ha of drained agricultural peatlands in our federal state, and more to come'. The project shows that it is possible to rewet drained peatlands and to earn a livelihood in a sustainable way by using biomass from the rewetted peatlands for energy generation. The peatland on the farm of Hans Voigt had to be rewetted in the framework of the state Peatland Conservation Program, which meant the end of suckler cow husbandry on 300 ha of grassland. As an alternative livelihood, peatland experts of the University of Greifswald worked out a strategy to use the wetland biomass. The biomass is harvested with adapted technology with wide tires and feeds a 800 kW plant, that provides energy to the district heating grid of the nearby city of Malchin. More information: http://niedermoor-nutzen.de/index.html

*Energy consultant Helbig (in the front) explains the functioning of the 15m long fen biomass bale feeding belt to minister Backhaus. Without jacket: farmer Hans Voigt.*

**Workshop 'Sustainable Peatlands for 'in situ' Oil Sands'**

This peatland seminar-tour will inform managers and practitioners of peatland policy, regulations, applied science, and best practices. Objectives are to

- Showcase applied research findings and restoration strategies
- Showcase pilot projects from industry and reclamation companies
- Promote research collaboration and business synergies
- Identify cost-effective operational solutions.

The seminar will be held at the Belle Petroleum Centre, in Peace River, AB on Wednesday, Sept. 3, 2014. The second day (Thursday, Sept. 4) will be a field tour. More information: http://www.gret-perg.ulaval.ca/fileadmin/fichiers/fichiersGRET/pdf/colloques___ateliers/PERG_NAIT_workshop_2014_program.pdf

**Already 17 000 ha of peatland restored in Yorkshire**

The Yorkshire Peat Partnership has restored 17 000 hectares of peatland in North and is well on track to hitting its target of 35 000 hectares by 2017. Programme Manager Tim Thom: ''Peat is important for the wildlife it supports, the water it holds and the carbon it stores. Not only that, but it creates healthy upland areas that everyone can enjoy and that is why this project is so vital."

The Yorkshire Peat Partnership is led by Yorkshire Wildlife Trust, Natural England, the North York Moors and Yorkshire Dales National Park Authorities and the Environment Agency with support from Yorkshire Water, National Trust, Yorkshire Dales Rivers Trust, Pennine Prospects, Moors for the Future and Nidderdale AONB. More information: http://www.yppartnership.org.uk/

**Indonesia's haze from peat fires kills 110 000 people per year**

Haze caused by burning peat forests in Indonesia kills an average of 110 000 people per year and up to 300 000 during el Niño events, while releasing hundreds of millions of tons of greenhouse gases into the atmosphere, warns a new report from Greenpeace. 'Sumatra: Going up in smoke' argues that peatland and forest protection are the best way to protect the region from the effects of haze.

The report focuses on Riau, a province that lies just across the Strait of Malacca from Singapore and accounts for 75 percent of all peat fires despite representing only 5 percent of Indonesia's land mass.

Greenpeace notes that since Indonesia's moratorium on new forest concessions was signed in 2011, 30 percent of hotspots have been recorded in areas that were supposedly protected by the regulation. Peat forests are five times more likely to burn than conventional forests.

Read more at http://news.mongabay.com/2014/0528-riau-fires.html#fClGWiJiZ6vceCTi.99

Download the report under:
http://www.greenpeace.org/international/Global/international/briefings/forests/2013/Peat-Forest%20Fires_Briefer_May28-2014.pdf

## Upcoming Events

Please visit the IMCG website (www.imcg.net) for announcements on a range of upcoming events http://www.imcg.net/pages/events.php)

## Recent scientific publications: peatland conservation

Every month a wealth of scientific papers are published, many of which have relevance for peatland management and mire conservation. In this column we present the title and the URL of a selection of these papers. The selection does not aim at completeness and will inevitably be biased by the (wide…) interest of the compiler (Hans Joosten). If you want to share papers that you fear otherwise would be missed, please send title and URL to joosten@uni-greifswald.de

1. Holocene development of maritime ombrotrophic peatlands of the St. Lawrence North Shore in eastern Canada: http://www.sciencedirect.com/science/article/pii/S0033589414000556
2. Spatial and temporal variation in damage and dieback in a threatened subantarctic cushion species: http://www.publish.csiro.au/paper/BT13207.htm
3. Oil Palm and deforestation in Papua New Guinea: http://onlinelibrary.wiley.com/doi/10.1111/conl.12058/abstract
4. A novel framework for quantifying past methane recycling by Sphagnum-methanotroph symbiosis using carbon and hydrogen isotope ratios of leaf wax biomarkers: http://onlinelibrary.wiley.com/doi/10.1002/2014GC005242/abstract?campaign=woletoc
5. Nitrogen deposition and the Nature Directives impacts and responses: Our shared experiences: http://jncc.defra.gov.uk/pdf/Report_521_web2.pdf
6. Bioavailability and radiocarbon age of fluvial dissolved organic matter (DOM) from a northern peatland-dominated catchment: effect of land-use change: http://alerts.springer.com/re?l=D0In5rc7kI6gt0l9gI17
7. Tradeoffs and scaling of functional traits in Sphagnum as drivers of carbon cycling in peatlands: http://onlinelibrary.wiley.com/doi/10.1111/oik.01061/abstract?campaign=woletoc
8. The potential of palaeoecological studies in archaeological wetland sites of the southern Baltic regions: http://www.nature.com/ncomms/2014/140611/ncomms5078/full/ncomms5078.html
9. Climate change drives a shift in peatland ecosystem plant community: Implications for ecosystem function and stability: http://onlinelibrary.wiley.com/doi/10.1111/gcb.12643/abstract?campaign=wolearlyview
10. The carbon stock of alpine peatlands on the Qinghai–Tibetan Plateau during the Holocene and their future fate: http://www.sciencedirect.com/science/article/pii/S0277379114001668
11. Identifying the role of environmental drivers in organic carbon export from a forested peat catchment: www.sciencedirect.com/science/article/pii/S0048969714006019
12. Accumulation rates of soil organic matter in wet dune slacks on the Dutch Wadden Sea islands: http://link.springer.com/article/10.1007/s11104-014-2078-9?wt_mc=alerts.TOCjournals
13. Plant functional diversity drives niche-size structure of dominant microbial consumers along a poor to extremely rich fen gradient: http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12288/abstract?campaign=wolacceptedarticle
14. The effect of winter drought on evaporation from a high elevation wetland: http://onlinelibrary.wiley.com/doi/10.1002/2014JG002648/abstract?campaign=wolacceptedarticle
15. Potential for extreme loss in high-latitude Earth surface processes due to climate change: http://onlinelibrary.wiley.com/doi/10.1002/2014GL060095/abstract?campaign=woletoc
16. Surface water inundation in the boreal-Arctic: potential impacts on regional methane emissions: http://iopscience.iop.org/1748-9326/9/7/075001
17. Carbon storage and release in Indonesian peatlands since the last deglaciation: http://www.sciencedirect.com/science/article/pii/S0277379114001656
18. The new localities of rare species Neidium hercynicum on the peatland areas of southern and south-eastern Poland:

http://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCAQFjAA&url=http%3A%2F%2Fwww.jeeng.net%2Ffulltxt.php%3FICID%3D1109126&ei=voy2U_qFLYTd4QTUq4CoAg&usg=AFQjCNEwPMFND-6CC3k2hT0IeU1cnMccig&sig2=ksLrzg3Mpgp9z9rB5CJttA&bvm=bv.70138588,d.bGE&cad=rja

19. Genetic diversity and spatial genetic structure of Chamaedaphne calyculata (Ericaceae) at the Western periphery in relation to its main continuous range in Eurasia: http://link.springer.com/article/10.1007/s12224-013-9165-1?wt_mc=alerts.TOCjournals
20. Plant macrofossil and biomarker evidence of fen–bog transition and associated changes in vegetation in two Finnish peatlands: http://hol.sagepub.com/content/24/7/828?etoc
21. Modeling peatland carbon stock in a delineated portion of the Nayshkootayaow river watershed in Far North, Ontario using an integrated GIS and remote sensing approach: http://www.sciencedirect.com/science/article/pii/S034181621400160X
22. Holocene peatland initiation, lateral expansion, and carbon dynamics in the Zoige Basin of the eastern Tibetan Plateau: http://hol.sagepub.com/content/early/2014/06/19/0959683614538077.abstract
23. Reduced global warming potential after wood ash application in drained Northern peatland forests: http://www.sciencedirect.com/science/article/pii/S0378112714003235
24. Development, carbon accumulation, and radiative forcing of a subarctic fen over the Holocene: http://hol.sagepub.com/content/early/2014/06/20/0959683614538072.abstract
25. Peatland area change in the southern Altay Mountains over the last twenty years based on GIS and RS analysis: http://link.springer.com/article/10.1007/s11707-014-0436-9

**Please send your contribution to the IMCG Bulletin by the 20th of each month: peatland@mweb.co.za**