



## IMCG Bulletin: December 2014



### Word from the Chair

[www.imcg.net](http://www.imcg.net)

Dear mire friends

May I wish you a blessed and prosperous 2015 on behalf of our Main Board. It is a new year ahead of us and I trust it is filled with promise and expectation for all of us.

When I reflected on 2014 I realised it was not such a quiet year for the IMCG as I thought. Going through the bulletins of 2014 revealed various highlights such as:

- The IMCG membership database was refreshed – a major undertaking
- The successful field symposium to Belarus: delegates really enjoyed it!
- Asbjørn Moen received the honour of a Norwegian Knighthood for services to science and conservation
- *Mires and Peat* maintained its publication rate and has been accepted for coverage in the Web of Science; and
- Various regional activities were reported ranging from Oceania (Australia, New Zealand), Southeast Asia (Cambodia, Indonesia, Malaysia, Myanmar), Africa (South Africa, Zimbabwe), Americas (Argentina, Canada), Europe (Belarus, Georgia, Germany, Ireland, United Kingdom)

The IMCG network is only as strong as its members are active. We are keen to learn more about mire and peatland related activities in your district, country or region!

On a personal note: both Althea and I completed our PhD's this past year (at last!); we are grateful for all the encouragement we received from our IMCG friends – thanks!!

As per usual, contributions for the IMCG Bulletin can be sent to Piet-Louis Grundling - [peatland@mweb.co.za](mailto:peatland@mweb.co.za)

### Mires and Peat

Our editor has tabled the annual report for Mires and Peat in December. Thanks to the enormous efforts of Olivia and her team the journal is established and inclusion in Web of Science has been a major achievement. Please refer to the number of publications from 2006 to 2014 in Table 1. However, the prosperous future of our journal is not yet fully secured. We need to generate more contributions to support this wonderful journal. If you are interested in the full report then please email Olivia at [o.m.bragg@dundee.ac.uk](mailto:o.m.bragg@dundee.ac.uk)

Mires and Peat is the open-access peer reviewed journal of IMCG and the International Peat Society (IPS). The editors are always ready to receive high-quality manuscripts on any topic relating to mires, peat and peatlands. See <http://mires-and-peat.net/> for a more detailed description of the scope of this unique journal for peat and peatland researchers and practitioners, as well as for 124 (so far) freely downloadable published articles.



Table 1. Summary of publication rate and Google Scholar citation rates derived using Harzing Publish or Perish (PoP) software; to 09 Nov 2014 and (Dec 2013) (from 2014 Annual Report of Mires and Peat).

Publication year (years ago)	Number of articles published	Number of citations recorded	Citations per article	Citations per article per year
2006 (8)	6	94 (84)	15.7 (14.0)	2.0 (2.0)
2007 (7)	9	72 (68)	8.0 (7.6)	1.1 (1.3)
2008 (6)	18	177 (137)	9.8 (7.6)	1.6 (1.5)
2009 (5)	8	42 (36)	5.3 (4.5)	1.1 (1.1)
2010 (4)	16	160 (119)	10.0 (7.4)	2.5 (2.5)
2011 (3)	16	166 (100)	10.4 (6.3)	3.5 (3.1)
2012 (2)	14	36 (22)	2.6 (1.6)	1.3 (1.6)
2013 (1)	17	28 (8)	1.6 (0.6)	1.6 (0.5)
2014 (0)	20	1	0.1	0.1

## News from our regions

### Southeast Asia

Noor Azura Ahmad ([azura@gec.org.my](mailto:azura@gec.org.my))

#### ASEAN Peatland Forests Project

A closing meeting was held in Pekanbaru, Riau, Indonesia on 10th November 2014 to share the lessons learnt from the ASEAN Peatland Forests Project (APFP) in Indonesia, Malaysia, Philippines and Viet Nam. The event was launched by the Deputy Minister of Environment Indonesia and the Governor of Riau province. The meeting included representatives from both APFP and SEApeat project implementing agencies. Country components shared their experiences, challenges and lessons learnt, as well as expectations for future peatland conservation work in their countries. The issues touched included project design, multi-stakeholder cooperation and joint fund management options.



Delegates visiting a plantation on a burnt peat swamp forest site



*Rewetting by the application of log based weirs (dams)*

The meeting was followed by an ASEAN Programme on Sustainable Management of Peatland Ecosystems (APSMPE) workshop on the 11<sup>th</sup>; a final APFP Project Steering Committee meeting, and a SEApeat coordination meeting on 12<sup>th</sup> November.

Delegates later joined a field visit to several project sites in Pelintung, Guntung, Momugo and Sepahat villages, in Riau province, on 13-14 November 2014.

The APSMPE meeting is crucial in the development of a future programme to continue with peatland conservation efforts in Southeast Asia. Inputs from the APSMPE workshop were taken into consideration during a follow-up meeting held in Philippines in mid-December 2014.

## Georgia

Izolda Matchutadze ([izo.muho@gmx.net](mailto:izo.muho@gmx.net))

### Mire Conservation Department in Georgia!!!

The Kolkheti mires in Georgia have been a topic of scientific interest since 1999 and many IMCG field visits and research were conducted there. All these activities are very important for Kolkheti mire conservation and contributed in preventing large peat extraction projects. Therefore, Rector Aliosha Bakuridze of the Batumi Shota Rustaveli University established the department of "Mire and Wetland Ecosystem Conservation" at the university. Izolda Matchutadze was appointed the head of the department from 1 October 2014.



*Izolda Matchutadze doing field work in a mire in Georgia (Photo: <http://www.paludiculture.uni-greifswald.de/>)*



*Student excursion on the Ispani II bog of Kolkheti lowlands (Photos: Hans Joosten)*

It is important for this new department to continue collaboration with the IMCG, University of Greifswald, Ramsar and the IUCN. Various research and management opportunities were identified and can be discussed with Izolda at [izo.muho@gmx.net](mailto:izo.muho@gmx.net).

The great contributions of Hans Joosten, Matthias Krebs and students are acknowledged in the establishment of this department.

## News from all over

Hans Joosten ([joosten@uni-greifswald.de](mailto:joosten@uni-greifswald.de))

### **Netherlands: peatland conservationist awarded knightship**

On Friday, December 12, 2014 Wim van Opbergen, the chairman of the Dutch NGO 'Werkgroep Behoud de Peel' (Peel Peatland Conservation Group) was awarded the royal title 'Knight of the Order of Orange-Nassau' for his 35 years of activities in the peatland conservation group.

Wim played all these years a crucial role in protecting, restoring and adequately managing the remnants of the Peel bogs. Over the years Wim conducted more than 2500 legal cases (incl. 500 at The Council of State, being the highest court of appeal against executive branch decisions) against expansion of intensive animal husbandry and associated ammonia emissions. Because of his vast knowledge and perseverance he won the vast majority of these cases and strongly influenced the development of national legislation and policy with respect to nitrogen deposition and their effects on bogs. Wim was over all these years also the driving force of much management work in the Peel bogs, where he organized and coordinated the work of volunteers to build thousands of dams in drainage ditches and cutting legions of birches to restore peat forming conditions in the heavily degraded bogs.

### **Belarus: new peatland documentary**

On December 18<sup>th</sup>, 2014, the public campaign "In Defense of Belarusian Mires" (<http://bezbolot.net/>) presented the new documentary "Mires' breath" (Belarus, 24 min, 2014). This is a story of the lives and destinies of mires and peatlands that got on the "black" list of territories destined for drainage, including the Ramsar Site Morochno. The documentary is also a narration of inhabitants that share their life stories connected to the mother(wet)land, and discusses the effects of peat extraction on the peatland ecosystem. See the trailer <http://youtube/LcQAU7HSpk>.

### **How palm oil expansion drives illegal logging in Indonesia**

A new report by the Environmental Investigation Agency UK explains how corruption and a lack of law enforcement are facilitating rampant illegal deforestation in Indonesia. The report, titled, "Permitting Crime: How Palm Oil Expansion Drives Illegal Logging in Indonesia" explores how regulations on palm oil cultivation, such as the granting of licenses, are routinely ignored in the Indonesian province of Central Kalimantan,



resulting in the wanton destruction of some of the country's richest and most biodiverse rainforest land. Crimes include government buyouts and police bribes by palm oil firms, as well as local governments transferring millions of dollars in resources from local communities to private companies. Read the full report under: <http://eia-international.org/wp-content/uploads/Permitting-Crime.pdf>

#### **Indonesia: Government to mend peatland ruling following protests**

The government of Indonesia plans to revise its newly issued regulation on the protection and management of peatland following protests from the business community. The regulation stipulates that the minimum water level in peatland must be maintained at 40 centimeters. Water levels in the country's peatlands are mostly much lower to grow oil palm and eucalyptus trees. "Peatland is a definite source of water and it has already shrunk from 7 million hectares to 5 million ha. We just want to conserve what's available, so let's see if we can modify the provision," the responsible Environment and Forestry Minister Siti Nurbaya Bakar said. "We're looking into this not only because it affects the wood-based industries but also because it affects the oil palm industry. We don't want any of these companies to close because of the new regulation." See more at: <http://www.thejakartapost.com/news/2014/12/31/govt-mend-peatland-ruling-amid-protests.html#sthash.T1P56Z6p.dpuf>

#### **Cargill releases first palm oil progress report**

At the end of November 2014 Cargill Tropical Palm released its first progress report on sustainable palm oil. The report details the company's plan to achieve a sustainable supply chain. Part of that plan is its pledge to deforestation-free palm oil, a commitment the company first announced in July 2014. It repeated that pledge at the United Nations Climate Summit in September in New York City. Specifically, Cargill pledged not to develop palm oil on peatland, not to exploit the rights of indigenous people and local communities, and to include smallholders.

At the U.N. Climate Summit, Cargill signed the Indonesian Palm Oil Pledge. Signers of the pledge committed to sustainable practices concerning palm oil. Cargill recently announced that it is on track to trace 80 percent of its palm oil in key markets back to the mills it came from, and that figure will reach 100 percent by December of next year, according to company estimates. Read the full report: <http://www.cargill.com/wcm/groups/public/@ccom/documents/document/na31709187.pdf>

#### **UK: High scores for impact of peatland research in new research rankings**

The impact of research to develop new markets to pay for peatland restoration has been scored highly in new rankings of the quality and impact of University research published by the UK Government. This was the first time that impact had been graded in the assessment.

Impact case studies based on original research from the Sustainable Uplands project were submitted by the University of Leeds and Birmingham City University. You can read the BCU case study [here](#). The BCU case study focussed on the development of markets for peatland restoration, based on the carbon, water and biodiversity benefits of fixing damaged bogs. The work led to the launch of the [UK Peatland Code](#) by Government last year, and the approach is currently being piloted in three parts of the country.

#### **Ireland: New peatlands exhibition and biodiversity boardwalk opens in Lullymore**

Lullymore Heritage & Discovery Park, in association with Bord na Móna, had their new Peatlands exhibition and Biodiversity Boardwalk launched last month by Tánaiste and Minister for Social Protection, Joan Burton T.D. The Peatlands Exhibition and Biodiversity Boardwalk, a first of its kind in Ireland, tells the story of the Irish midlands raised bogs and the rural communities living beside them. Visitors will have an opportunity to



discover how peatlands form, the flora and fauna living on them, past uses, future possibilities for the peatlands and even the gruesome secrets of bog bodies. More information: <http://www.bordnamona.ie/news/latest/new-peatlands-exhibition-and-biodiversity-boardwalk-opens-in-lullymore-heritage-discovery-park/>

### **Lower Saxony/ Germany. Christmas window of opportunity for destroying peatlands**

The Ministry of Agriculture of the German federal state of Lower Saxony has announced on December 19, that the 2014 EU threshold for ploughing up grassland has not been reached and that thus until the end of the year no permissions are needed for ploughing up grasslands. This has led to 13 days of jester's license in which farmers, instead of sitting under the Christmas tree, established 'faits accomplis'. In Lower Saxony much peatland has in recent years been converted to deeply drained fields of maize that is perversely used as substrate for "biogas" generation. The CO<sub>2</sub>-losses from degraded peat are, however, much larger than the emission reductions from using the produced biogas.

### **Peatland conservation relevant papers**

Collected by Hans Joosten. If you want to share papers, please send the title and URL to Hans at [joosten@uni-greifswald.de](mailto:joosten@uni-greifswald.de)

1. A 5-year study of the impact of peatland revegetation upon DOC concentrations: <http://www.sciencedirect.com/science/article/pii/S0022169414008993>
2. Effect of vegetation cover on the ground thermal regime of wooded and non-wooded palsas: <http://onlinelibrary.wiley.com/doi/10.1002/ppp.1817/abstract?campaign=wolotoc>
3. Increased tree establishment in Lithuanian peat bogs — Insights from field and remotely sensed approaches: <http://www.sciencedirect.com/science/article/pii/S0048969714014004>
4. *Calluna vulgaris*-dominated upland heathland sequesters more CO<sub>2</sub> annually than grass-dominated upland heathland: <http://www.sciencedirect.com/science/article/pii/S0048969714014752>
5. Carbon pools and fluxes in a Tibetan alpine *Kobresia pygmaea* pasture partitioned by coupled eddy-covariance measurements and <sup>13</sup>CO<sub>2</sub> pulse labeling: <http://www.sciencedirect.com/science/article/pii/S0048969714015277>
6. Long-term successional changes in peatlands of the Hudson Bay Lowlands, Canada inferred from the ecological dynamics of multiple proxies: <http://hol.sagepub.com/content/25/1/92?etoc>
7. Developing and evaluating rapid field methods to estimate peat carbon: <http://link.springer.com/article/10.1007/s13157-014-0574-6>
8. Drastic turnover of Bryophyte vegetation on bog microforms initiated by air pollution in Northeastern Estonia and bordering Russia: <http://link.springer.com/article/10.1007/s13157-014-0569-3>
9. Spatial variations in pore-water biogeochemistry greatly exceed temporal changes during baseflow conditions in a Boreal river valley mire complex, Northwest Russia: <http://link.springer.com/article/10.1007/s13157-014-0576-4>
10. Nitrous oxide emission budgets and land-use-driven hotspots for organic soils in Europe: <http://www.biogeosciences.net/11/6595/2014/bg-11-6595-2014.html>
11. A new hypothesis for the orientation and expansion of pools in temperate blanket and raised bogs: <http://www.james-hc-fenton.eu/Essays/Pools%20to%20hags%20-%20J%20Fenton%20-%20Dec%202014.pdf>
12. The distribution and amount of carbon in the largest peatland complex in Amazonia: <http://iopscience.iop.org/1748-9326/9/12/124017>



13. 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=woletoc>
14. A global predictive model of carbon in mangrove soils: <http://iopscience.iop.org/1748-9326/9/10/104013/article>
15. Montane meadow hydrology, plant community, and herbivore dynamics:  
<http://www.esajournals.org/doi/abs/10.1890/ES14-00173.1>
16. Local adaptations in bryophytes revisited: the genetic structure of the calcium-tolerant peatmoss *Sphagnum warnstorffii* along geographic and pH gradients:  
<http://onlinelibrary.wiley.com/doi/10.1002/ece3.1351/abstract>
17. Charring temperatures are driven by the fuel types burned in a peatland wildfire:  
<http://journal.frontiersin.org/Journal/10.3389/fpls.2014.00714/abstract>
18. Saturated hydraulic conductivity measurements of drained peat soil: [http://sdpg.pg.gda.pl/pij/wp-content/blogs.dir/133/files/2014/12/01\\_2014\\_16-gasowska.pdf](http://sdpg.pg.gda.pl/pij/wp-content/blogs.dir/133/files/2014/12/01_2014_16-gasowska.pdf)
19. Spatial variability of soil lipids reflects vegetation cover in a French peatland: <https://hal-sde.archives-ouvertes.fr/insu-01057366/document>
20. Micropropagation of *Sphagnum* moss for peat land regeneration:  
[http://www.actahort.org/books/1055/1055\\_24.htm](http://www.actahort.org/books/1055/1055_24.htm)
21. Developing new potting mixes with Sphagnum fibers: <http://pubs.aic.ca/doi/abs/10.4141/cjss2013-103?src=recsys>;
22. Hydrophysical evolution, soil water dynamics, and productivity of *Sphagnum* carpets in a regenerating cutover peatland: [http://www.gret-perg.ulaval.ca/uploads/tx\\_centrerecherche/TaylorN\\_MSc\\_2014\\_01.pdf](http://www.gret-perg.ulaval.ca/uploads/tx_centrerecherche/TaylorN_MSc_2014_01.pdf)
23. Late Holocene climate change and anthropogenic activities in north Xinjiang: Evidence from a peatland archive, the Caotianhu wetland: <http://hol.sagepub.com/content/25/2/323?etoc>
24. As old as the mountains: the radiations of the Ericaceae:  
<http://onlinelibrary.wiley.com/doi/10.1111/nph.13234/abstract?campaign=wolearlyview>
25. Global vulnerability of peatlands to fire and carbon loss:  
[http://www.nature.com/ngeo/journal/v8/n1/full/ngeo2325.html?WT.ec\\_id=NGEO-201501](http://www.nature.com/ngeo/journal/v8/n1/full/ngeo2325.html?WT.ec_id=NGEO-201501)
26. Net regional methane sink in High Arctic soils of northeast Greenland:  
[http://www.nature.com/ngeo/journal/v8/n1/full/ngeo2305.html?WT.ec\\_id=NGEO-201501](http://www.nature.com/ngeo/journal/v8/n1/full/ngeo2305.html?WT.ec_id=NGEO-201501)
27. Do moss bags containing devitalized *Sphagnum denticulatum* reflect heavy metal concentrations in bulk deposition?: <http://www.sciencedirect.com/science/article/pii/S1470160X14005238>
28. Palaeoenvironmental changes in Central Europe (NE Poland) during the last 6200 years reconstructed from a high-resolution multi-proxy peat archive:  
<http://hol.sagepub.com/content/early/2014/12/08/0959683614561887.abstract>
29. Significant non-symbiotic nitrogen fixation in Patagonian ombrotrophic bogs:  
<http://onlinelibrary.wiley.com/doi/10.1111/gcb.12849/abstract?campaign=wolacceptedarticle>
30. Re-evaluation of late Holocene fire histories of three boreal bogs suggest a link between bog fire and climate: <http://onlinelibrary.wiley.com/doi/10.1111/bor.12086/abstract?campaign=woletoc>
31. Spatial analysis of soil subsidence in peat meadow areas in Friesland in relation to land and water management, climate change, and adaptation: <http://link.springer.com/article/10.1007/s00267-014-0392-x>
32. Improving estimates of tropical peatland area, carbon storage, and greenhouse gas fluxes:  
<http://link.springer.com/article/10.1007%2Fs11273-014-9402-2>
33. Spectral reflectance of floodplain vegetation communities of the Okavango Delta:  
<http://link.springer.com/article/10.1007/s11273-014-9403-1>



34. Vulnerability assessment of mangroves to climate change and sea-level rise impacts:  
<http://link.springer.com/article/10.1007/s11273-014-9397-8>
35. Assessment of an integrated peat-harvesting and reclamation method: peatland-atmosphere carbon fluxes and vegetation recovery: <http://link.springer.com/article/10.1007/s11273-014-9399-6>
36. A mesocosm study of the effect of restoration on methane (CH<sub>4</sub>) emissions from blanket peat:  
<http://link.springer.com/article/10.1007/s11273-014-9349-3>
37. Long-term disturbance dynamics and resilience of tropical peat swamp forests:  
<http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12329/abstract?campaign=woletoc>
38. Positive shrub–tree interactions facilitate woody encroachment in boreal peatlands:  
<http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12331/abstract?campaign=woletoc>
39. Hydrological niches in terrestrial plant communities: a review:  
<http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12332/abstract?campaign=woletoc>
40. Impact of groundwater table and Plateau Zokors (*Myospalax baileyi*) on ecosystem respiration in the Zoige peatlands of China:  
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4277300/pdf/pone.0115542.pdf>
41. The effect of rice straw on the priming of soil organic matter and methane production in peat soils:  
<http://www.sciencedirect.com/science/article/pii/S003807171400385X>
42. Origin, composition, and transformation of dissolved organic matter in tropical peatlands:  
<http://www.sciencedirect.com/science/article/pii/S0016703714001768>
43. Estimation of fuel mass and its loss during a forest fire in peat swamp forests of Central Kalimantan, Indonesia: <http://www.sciencedirect.com/science/article/pii/S0378112713007895>
44. Is CO<sub>2</sub> flux from oil palm plantations on peatland controlled by soil moisture and/or soil and air temperatures?: <http://link.springer.com/article/10.1007%2Fs11027-013-9518-3>
45. Effects of wind-driven spatial structure and environmental heterogeneity on high-altitude wetland macroinvertebrate assemblages with contrasting dispersal modes:  
<http://onlinelibrary.wiley.com/doi/10.1111/fwb.12488/abstract?campaign=woletoc>

**Please send your contribution to the **IMCG Bulletin** by the 25<sup>th</sup> of each month:**  
[peatland@mweb.co.za](mailto:peatland@mweb.co.za)