



IMCG Bulletin: February 2016



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Word from the Chair

Dear mire friends

This bulletin focuses on World Wetlands Day (WWD) contributions received from across the globe from several of our members. World Wetlands Day took place on 2 February. The theme “Sustainable Livelihoods” falls under Ramsar’s multi-year banner of “Wetlands for our future”. We congratulate France with a staggering 635 registered events!

Severe weather patterns are still impacting on peatlands globally. Read more about Tasmanian peat fires and the spike in Carbon Dioxide levels in NEWS SNIPPETS (page 6). The continued involvement of western companies in developing peat based industries in Africa raise serious concerns: a case in point is the HQ Power company owned by Turkish investor, Hakan Bas that exploits a 4200 ha concession in Rwanda to generate electricity using peat – adding more carbon dioxide into the atmosphere whilst destroying mires in the process despite ample hydropower and biomass (paludiculture) options being available in Rwanda and Burundi.

Let’s continue with raising awareness on the crucial role mires and other wetlands play in the ecology and persistence of life on earth. We need to roll out projects in especially the developing world to establish a sound knowledge base for policy makers and governments to draw on when they need to make decisions that would result in degradation of sensitive environments and ecosystems.

Please send your March contribution by 4 April 2016 to Piet-Louis Grundling at peatland@mweb.co.za.

August 2016: will you be there?



Kuching, Malaysia

Rain forest, Brunei

Join us and come see for yourself.....

IMCG FIELD SYMPOSIUM- MALAYSIA AND BRUNEI: 19 to 28 August 2016

Meanwhile 46 people have preliminarily registered for participation in the Field Symposium and the organizers are at the moment sorting out whether these all can be accommodated (e.g. seats on internal flights and accommodation in small towns). In case the number of applicants exceeds the number of available places, a selection will be made, based on a) first come first served, b) IMCG membership, and c) possible other strategic considerations. In the next days we will inform you further on binding registration, including prepayments.

So, if you are interested, but have not registered yet, register as soon as possible at: IMCG - Hans Joosten: joosten@uni-greifswald.de or GEC - Julia Lo: julialo@gec.org.my

Forms at <http://www.imcg.net/pages/events/imcg2016.php>

Mires and Peat

Mires and Peat is the open-access peer reviewed journal of IMCG and the International Peat Society (IPS). Find it online at <http://mires-and-peat.net/> and in the *Thomson Master Journal List (Web of Science)* – **2014 Impact Factor 0.806**. Recent articles include:

1. **Soil CO₂ efflux in a degraded raised bog is regulated by water table depth rather than recent plant assimilate** (U.H. Kritzler, R.R.E. Artz and D. Johnson) [Volume 17 Article 01]
2. **High methane emissions from restored Norway spruce swamps in southern Finland over one growing season** (M. Koskinen, L. Maanavilja, M. Nieminen, K. Minkkinen and E-S. Tuittila) [Volume 17 Article 02]
3. **Long-term peat accumulation in temperate forested peatlands (*Thuja occidentalis* swamps) in the Great Lakes region of North America** (C.A. Ott and R.A. Chimner) [Volume 18 Article 01]
4. **Impact of drainage on vegetation of transitional mires in Estonia** (J. Paal, I. Jürjendal, A. Suija and A. Kull) [Volume 18 Article 02]
5. **Geotechnical properties of peat soil stabilised with shredded waste tyre chips** (M.A. Rahgozar and M. Saberian) [Volume 18 Article 03]
6. **Record growth of *Sphagnum papillosum* in Georgia (Transcaucasus): rain frequency, temperature and microhabitat as key drivers in natural bogs** (M. Krebs, G. Gaudig and H. Joosten) [Volume 18 Article 04]
7. **Revegetation dynamics after 15 years of rewetting in two extracted peatlands in Sweden** (S.A. Kozlov, L. Lundin and N.A. Avetov) [Volume 18 Article 05]

Send your new manuscripts on **any topic** relating to mires, peatlands and peat to the Editor-in-Chief o.m.bragg@dundee.ac.uk, for:

Please send **ALL SUBMISSIONS**, whether for a special volume or a standard volume, to the Editor-in-Chief o.m.bragg@dundee.ac.uk in the first instance, for:

- friendly editorial management by eminent peatland specialists (O.M. Bragg, R.S. Clymo, S.N.P. Glatzel, A.P. Grootjans, P.M. Jones and J.O. Rieley);
- minimal publication delays (the average turnaround time from submission to publication is currently less than 230 days); and
- free global exposure of your work in an ISI/IF journal.

News from our regions

New Zealand news

Bev Clarkson: Clarksonb@landcareresearch.co.nz

World Wetlands Day

World Wetlands Day was celebrated in New Zealand with various events ([world wetlands day](#)) including a Citizen Science workshop, barbeque and guided wetlands walk at Travis Wetland, Christchurch, South Island, and an 'Explore a Wetland' event at Lake Rotokare, Taranaki, North Island.

Lake Rotokare is a Sanctuary project administered by a charitable trust and led by the community. A predator-proof fence, completed in 2008, protects 230 ha of lake, mires and indigenous forest ecosystems ([Lake Rotokare volunteers](#)). The World Wetlands Day event attracted more than 100 people to hear from agencies and groups involved in wetland protection. It featured hands-on sessions on lakeshore, mire and swamp forest environments, including monitoring techniques and wetland enhancement methods.



Mire monitoring at Lake Rotokare: World Wetlands Day 2016

Russia

Tatiana Minayeva (tatiana.minaeva@wetlands.org) reports on the following:

During the past seven years Tatiana Yourkovskaya with colleagues have organized during World Wetlands Day a mire science seminar in memory of the famous Russian mire scientist Ekaterina Galkina in St Petersburg with support of Russian Botanical Society <http://www.rossbot.ru/>. This seminar plays an extremely significant role in the maintenance of mire science traditions in Russia. This is not a formal scientific conference but a free platform for discussion of new thoughts, interesting facts and discussions around mire concepts. The seminar brings together scientists and experts from different corners of Russia, of different ages and from different disciplines. For young people it is the unique possibility to learn directly from the authors of key mire concepts as well as introducing new approaches for consideration by the older generation.

This year the VII th Seminar in Memory of Ekaterina Galkina was held on 2-3 February in the Komarov Botanical Institute <http://www.binran.ru/> and was attended by 40 people including participants from Belarus, Latvia, and different parts of Russia. The presentations were thought provoking, the discussions full of passion. We hope that this tradition will go on and that the number of Russian and foreign participants will increase.



Participants at the VII th Seminar in Memory of Ekaterina Galkina, Komarov Botanical Institute

IMCG excursion to Russian permafrost peatlands



The proposed dates for this excursion are 20 July to 5 August 2017. The excursion will focus on the European part of Russia and start in Syktyvkar (Komi Republic) and end up in Naryan-Mar (Nenets Autonomous okrug). We plan to visit peatlands from the northern taiga to coastal tundra. Workshops will be held both in Syktyvkar (more science based) and Naryan-Mar (conservation and restoration based).

Organisations involved are: The Institute of Biology Komi of the Ural Research Centre of the Russian Academy of Sciences; the Institute of Forest Sciences RAS; Nenets Autonomous Okrug administration (Russia); Care for Ecosystems UG (Germany) with Nadezhda Goncharova (Syktyvkar); Rusaln Bolshakov (Naryan Mar); Andrey Sirin (Moscow Province); Tatiana Minayeva (CfE) (tatiana.minaeva@wetlands.org).

Detailed information with maps and preliminary logistics are planned for the next bulletin. Please block these dates in your diary!!

France

Francis Muller francis.muller@reseau-cen.org

World Wetlands Day on French peatlands in 2016

This year again, France was the country in the world which had the greatest number of events linked to WWD. Why? Certainly because a large mobilization focuses around that special day (that turned here to be rather a month!), including the five national wetland resources centres, the National board for Water and Aquatic Biotopes (ONEMA) and Ramsar France, an association that was especially created to promote Ramsar sites in the country. Of course, amidst the 635 (!) events in the country, only a small number concerned mires and peatlands, a minority type of wetlands in France. Mild weather conditions enabled most events to be held, which is not always guaranteed in mid-winter!

As all news didn't come back to us from the local organizers, let me give you only a partial review of what has been done in peatlands, especially in our region of Franche-Comté (Eastern France):

- A new film: "mires: hidden treasures of the Jura mountain" has been presented. This 26 min. documentary was made thanks to the LIFE+ programme "Jura mountain peatlands"; it was presented in 4 theatres and was seen by 900 people. The film is downloadable on <http://www.life-tourbieres-jura.fr/images-film-page.html> from March 10th onwards.
- Two visits on snow-covered mires have been organized by the Jura Regional Nature Park; if specific plants could generally not be seen (!), visitors could perceive the importance of mires in the water cycle... and enjoy wonderful landscapes.
- In the botanical garden in Besançon, children were invited to discover carnivorous plants in the greenhouses, and learn how to garden without using peat.

At the other end of France in the Landes of Aquitaine, also part of the WWD, we participated in a 65-person meeting about the protection of regional mires, that enabled us as well to visit the local peatlands, scattered in the sandy *Pinus pinaster* forest, the largest forest in continental France (1 million hectares).



Photographs:

Photo 1&2, by M. Paris and E. Bunod, CEN Franche-Comté: the premiere of the new film "Mires – Hidden treasures of the Jura mountain" in the cinema theatre of Pontarlier.



Photo 3, by Samuel Delacroix, with snow shoes on a mire in the Jura Nature Regional Park

Photo 4, by Stéphanie Blais, FCEN / Pôle-relais tourbières : children in the green houses of the Besançon Botanical Garden, around the insectivorous plants



Photo 4, by F. Muller, FCEN/Pôle-relais tourbières: participants to the Aquitaine mire meeting, in tourbière de l'Estanque, Mées (Landes, France)

Photo 5, by Aurore Gabaldon, FCEN/Pôle-relais tourbières: Regional Burgundy-Franche-Comté TV proposed a live morning emission in the mires of the Jura Plateau, to let all the WWD events know



Argentina news

Rodolfo Iturraspe: rodolfoiturraspe@yahoo.com

World wetland day in Ushuaia

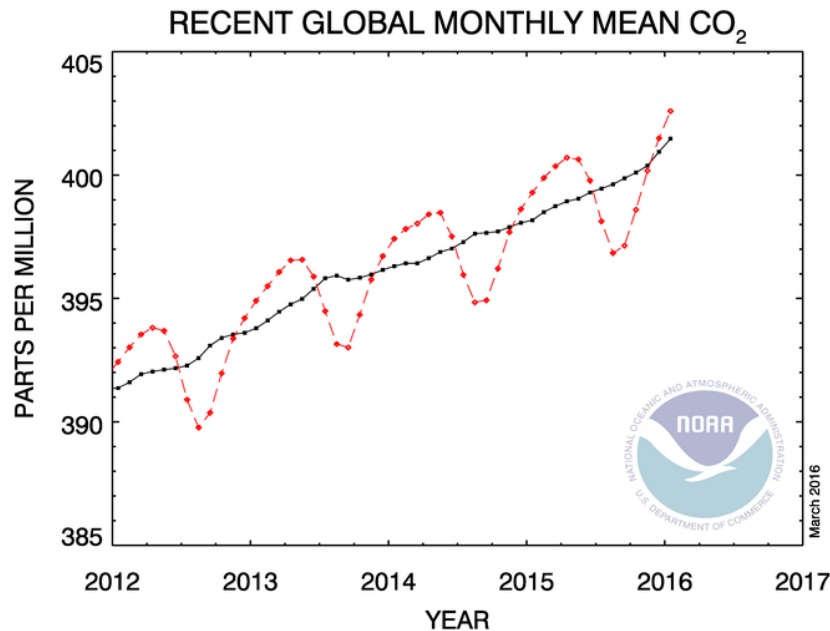
As part of the activities celebrating the World Wetland Day, the Provincial Direction of Water Resources of Tierra del Fuego, Argentina, organized a guided visit to the southernmost RAMSAR site in the World, named Vinciguerra Glacier and related mires. This RAMSAR site is located on an impressive mountain valley, very close to the Ushuaia city. It includes several kinds of beautiful wetlands. Sphagnum raised bogs at the river margins constitute a special attraction. About 30 participants guided by Sergio Camargo, who is a functionary of the water Agency, enjoyed the trekking by the wetland area.

ESTABLISHMENT OF INDONESIA'S PEATLAND RESTORATION AGENCY LAUDED: The agency, which has been set up based on Presidential Regulation Number 1 of 2016, is chiefly tasked with preventing forest fires that particularly occur in peatlands and to restore such areas gutted by forest fires, particularly on Sumatra and Kalimantan Islands

<http://www.antaraneews.com/en/news/102806/establishment-of-indonesias-peatland-restoration-agency-lauded>

CARBON DIOXIDE LEVELS IN ATMOSPHERE SPIKE. Is this as in 1998 also influence/result of massive peat fires in SE Asia?

<https://www.wmo.int/media/content/carbon-dioxide-levels-atmosphere-spike>



APRIL'S \$100M ENVIRONMENTAL CONSERVATION PLAN IMPERATIVE FOR FUTURE BUSINESS: Asia Pacific Resources International Holdings, or APRIL, a global producer of fibre, pulp and paper, believes that its \$100 million investment plan for natural forest conservation is imperative for their future business, executives at the company said.

<http://www.aseanpeat.net/newsmaster.cfm?&menuid=11&action=view&retrieveid=3010>

LAND SWAPS HOPED TO SPEED UP PEATLAND RESTORATION: The Peatland Restoration Agency (BRG) plans to offer asset swaps to local communities using peatland for plantation purposes in an effort to restore two million hectares of peatland in five years.

<http://www.aseanpeat.net/newsmaster.cfm?&menuid=11&action=view&retrieveid=3008>

Peatland conservation relevant papers February 2016

Collected by Hans Joosten: joosten@uni-greifswald.de

1. Seed dispersal by dabbling ducks: an overlooked dispersal pathway for a broad spectrum of plant species: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12531/full>
2. FAOSTAT estimates of greenhouse gas emissions from biomass and peat fires: <http://link.springer.com/article/10.1007%2Fs10584-015-1584-y>
3. Contrasting response to mowing in two abandoned rich fen plant communities: <http://www.sciencedirect.com/science/article/pii/S0925857415302123?np=y>
4. Effects of permafrost aggradation on peat properties as determined from a pan-Arctic synthesis of plant macrofossils: <http://onlinelibrary.wiley.com/doi/10.1002/2015JG003061/abstract?campaign=wolotoc>
5. The effective oxidation state of a peatland: <http://onlinelibrary.wiley.com/doi/10.1002/2015JG003182/abstract?campaign=wolotoc>

6. Identifying scale-emergent, nonlinear, asynchronous processes of wetland methane exchange: <http://onlinelibrary.wiley.com/doi/10.1002/2015JG003054/abstract?campaign=wolletoc>
7. Root oxygen loss from *Raphia taedigera* palms mediates greenhouse gas emissions in lowland neotropical peatlands: <http://link.springer.com/article/10.1007/s11104-016-2824-2>
8. Effects of fen management and habitat parameters on staphylinid beetle (Coleoptera: Staphylinidae) assemblages in north-eastern Germany: <http://link.springer.com/article/10.1007%2Fs10841-016-9847-0>
9. Chemical and botanical indicators of groundwater inflow to Sphagnum-dominated peatlands: <http://www.sciencedirect.com/science/article/pii/S1470160X15007177>
10. A legacy of human-induced ecosystem changes: spatial processes drive the taxonomic and functional diversities of testate amoebae in Sphagnum peatlands of the Galápagos: <http://onlinelibrary.wiley.com/doi/10.1111/jbi.12655/abstract?campaign=wolletoc>
11. Is the subarctic landscape still a carbon sink? Evidence from a detailed catchment balance: <http://onlinelibrary.wiley.com/doi/10.1002/2015GL066970/abstract?campaign=wolacceptedarticle>
12. Comparative seed germination traits in bog and fen mire wetlands: <http://www.sciencedirect.com/science/article/pii/S0304377016300018>
13. Comment on: Vegetation burning for game management in the UK uplands is increasing and overlaps spatially with soil carbon and protected areas: <http://www.sciencedirect.com/science/article/pii/S0006320716300027>
14. Reply to comment on: Vegetation burning for game management in the UK uplands is increasing and overlaps spatially with soil carbon and protected areas: <http://www.sciencedirect.com/science/article/pii/S0006320716300015>
15. Variation of energy and carbon fluxes from a restored temperate freshwater wetland and implications for carbon market verification protocols: <http://onlinelibrary.wiley.com/doi/10.1002/2015JG003083/abstract?campaign=wolacceptedarticle>
16. Creating fen initiation conditions: a new approach for peatland reclamation in the oil sands region of Alberta: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2664.12555/abstract?campaign=wolletoc>
17. Effects of water level and grassland management on alpha and beta diversity of birds in restored wetlands: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2664.12588/abstract?campaign=wolletoc>
18. Microform-scale variations in peatland permeability and their ecohydrological implications: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12530/abstract?campaign=wolletoc>
19. Analyses of transcriptome sequences reveal multiple ancient large-scale duplication events in the ancestor of Sphagnopsida (Bryophyta): <http://onlinelibrary.wiley.com/doi/10.1111/nph.13887/abstract?campaign=wolearlyview>
20. Environmental processes derived from peatland geochemistry since the last deglaciation in Dajiuhu, Shennongjia, central China: <http://onlinelibrary.wiley.com/doi/10.1111/bor.12168/abstract?campaign=wolearlyview>
21. Late Weichselian and Holocene record of the paleoenvironmental changes in a small river valley in Central Poland: <http://www.sciencedirect.com/science/article/pii/S0277379116300075>
22. Adaptation services of floodplains and wetlands under transformational climate change: <http://onlinelibrary.wiley.com/doi/10.1890/15-0848/abstract?campaign=wolacceptedarticle>
23. Effects of wetland plants on denitrification rates: a meta-analysis: <http://onlinelibrary.wiley.com/doi/10.1890/14-1525/abstract?campaign=wolacceptedarticle>
24. Characterizing forest structure variations across an intact tropical peat dome using field samplings and airborne LiDAR: <http://onlinelibrary.wiley.com/doi/10.1890/15-0017/abstract?campaign=wolacceptedarticle>
25. Conservation of a groundwater-dependent mire-dwelling dragonfly: implications of multiple threatening processes: <http://link.springer.com/article/10.1007/s10841-016-9852-3>
26. Late-Holocene climate dynamics recorded in the peat bogs of Tierra del Fuego, South America: <http://hol.sagepub.com/content/26/3/489?etoc>
27. Why protect nature? Rethinking values and the environment: <http://www.pnas.org/content/113/6/1462.full>

28. Resilience of peatland ecosystem services over millennial timescales: evidence from a degraded British bog: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12565/abstract?campaign=wolacceptedarticle>
29. A soil carbon proxy to predict CH₄ and N₂O emissions from rewetted agricultural peatlands: <http://www.sciencedirect.com/science/article/pii/S0167880916300081>
30. Holocene climate variability and anthropogenic impacts from Lago Paixban, a perennial wetland in Peten, Guatemala: <http://www.sciencedirect.com/science/article/pii/S0921818115300473>
31. Variable carbon losses from recurrent fires in drained tropical peatlands: <http://onlinelibrary.wiley.com/doi/10.1111/gcb.13186/abstract?campaign=woletoc>
32. Geochemical evidence for peat bog contribution to streamflow generation process: case study of Vltava River headwaters, Czech Republic: <http://www.tandfonline.com/doi/abs/10.1080/02626667.2016.1140173>
33. 4000 years of changing wetness in a permafrost polygon peatland (Kytalyk, NE Siberia): A comparative high-resolution multi-proxy study: <http://onlinelibrary.wiley.com/doi/10.1002/ppp.1869/abstract?campaign=woletoc>
34. Sheep grazing in the North Atlantic region: A long-term perspective on environmental sustainability: <http://link.springer.com/article/10.1007/s13280-016-0771-z>
35. Late Quaternary palaeoenvironmental reconstruction of central Tierra del Fuego (Argentina) based on pollen and fungi: <http://www.sciencedirect.com/science/article/pii/S1040618215301270>
36. Dendrochronology and radiocarbon dating of subfossil conifer logs from a peat bog, Maramureş Mts, Romania: <http://www.sciencedirect.com/science/article/pii/S1040618215011921>
37. Between the mountains and the sea: Late Holocene Caspian Sea level fluctuations and vegetation history of the lowland forests of northern Iran: <http://www.sciencedirect.com/science/article/pii/S1040618215014354>
38. The neotropical Gran Sabana region: Palaeoecology and conservation: <http://hol.sagepub.com/content/early/2016/03/01/0959683616632895.abstract>

Leaflets: Factsheet

Scottish Forum on Natural Capital

http://naturalcapitalscotland.com/docs/070_342_finalscottishforumonnaturalcapitalbrief_peatlandsandwaterquality_february2016_1454923025.pdf?ct=t%28February_2016_newsletter2_12_2016%29&mc_cid=06383b007e&mc_eid=5413830ff2

Quiz: This photo is from an Australian mire— can you guess from which part of Australia? Tip: This mire has a significant place in the history of the IMCG and global peatland conservation.



The January quiz photo was from an undescribed mire on the Mozambique border with South Africa close to the Indian Ocean.