


IMCG Bulletin: August 2015

INTERNATIONAL MIRE CONSERVATION GROUP

www.imcg.net

Word from the Chair

Dear mire friends

Are mire conservation initiatives making a difference in the struggle to conserve significant tracts of natural landscapes?

In the last 20 years the IMCG, through its members and their networks has raised the plight of mires on various international arenas: from Ramsar meetings since 1996 to the Climate Conferences of the past decade. How successful have we been?

Rewetting of peatlands has certainly been on the forefront of many conservation initiatives. Refer to the various publications, planned seminars, and training opportunities in this issue of the IMCG Bulletin dealing with this and related topics. Our 2016 IMCG Bi-annual Field Symposium, Conference and General Assembly in Malaysia (the 2nd half of August 2016) will certainly provide hands on experience in peatland management challenges on a global scale – see the announcement on page 3! And please register as soon as possible: places are limited!

We would be very interested in hearing your view in this matter, please send your contribution!

What is new about mires and peatlands in your part of the world? The Bulletin is 2 years old!! If you have any suggestions in improving it please send your suggestions to Piet-Louis Grundling - peatland@mweb.co.za.


What on earth are they doing? Read more on page 3.

Get to know your Main Board members – Featuring (last but not least!):

Piet-Louis Grundling

Piet-Louis is director of the Centre of Wetland Research and Training (WETREST) and a research associate of the Centre for Environmental Management, University of the Free State, South Africa.

He has been involved in peatland work since 1988 as a student studying geology at the University of Pretoria. He completed his PhD studies at the University of Waterloo, Canada, in 2014 focusing on peatland hydrology. He has a keen interest in training and capacity building of the South African wetland community, as well as communal based wetland rehabilitation projects.

Piet-Louis has been a member of the IMCG Main Board member since 2000, and since 2010 the Chair. He currently resides in Pretoria, South Africa, with his wife Althea (also an IMCG member) and their daughters Renée and Amy

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*).

The latest new article is:
Peatland carbon stores and fluxes in the Snowy Mountains, New South Wales, Australia
(G.S. Hope and R.A. Nanson) [Volume 15, Article 11]

The next special volume will focus on ***Growing Sphagnum*** (Volume 17). We plan to open this volume, compiled by Line Rochefort and Stephan Glatzel, on 01 January 2016.

We continue to receive promised manuscripts and new offers of material for all three of the currently proposed special volumes, namely:

- ***Growing Sphagnum*** (both *in-situ* and *ex-situ*; for example, for peatland restoration and Sphagnum farming purposes): contact the Editor-in-Chief or Stephan Glatzel (stephan.glatzel@univie.ac.at).
- ***Greenhouse gas fluxes in degraded and restored peatlands: Global perspectives***. Based on invited papers from the Society for Ecological Restoration (SER) 6th World Conference, held in Manchester (UK) in August. This volume will aim to provide a global overview of our current knowledge of greenhouse gas (GHG) dynamics along a land use gradient from degraded to restored/rewetted peatlands. Studies that describe aquatic carbon losses from these peatlands, the development of country specific emissions factors (e.g. CO_2, CH_4, N_2O, DOC) and improved methods for determining activity data are particularly encouraged. Contact Stephan Glatzel or David Wilson (david.wilson@earthymatters.ie) to discuss.
- ***Peatland Strategies and Action Plans***: submit to the Editor-in-Chief (see below) or contact Peter Jones (peter.s.jones@cyfoethnaturiolcymru.gov.uk) to discuss.

For our continuing series of standard volumes, we are always happy to receive new manuscripts on any topic relating to mires, peatlands and peat. Please send these to the Editor-in-Chief o.m.bragg@dundee.ac.uk, 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 journal.

IMCG Field Symposium- Malaysia and Brunei (Peninsular Malaysia and Borneo)- August 2016

IF YOU ARE CONSIDERING TO PARTICIPATE: PRE-REGISTER AS SOON AS POSSIBLE!

The field symposium will be held from 19 August to 28 August 2016. The scientific congress and IMCG General Assembly will be held at the end of the Field Symposium.

The program will be taking participants across the variety of lowland peat swamp forest and highland peatlands in both Borneo and Peninsular Malaysia. These peatlands are some of the best developed tropical peat swamp forests globally with high biodiversity and unique characteristics. The visits will also give an opportunity to see ongoing conservation and rehabilitation measures as well as engagement of local communities. Due to logistic constraints participants may be restricted to a maximum of 35-40 participants.

The cost will be approximately 1100 euros including internal flights, ground transport, food and accommodation (based on twin sharing basis). The symposium will start at Kuching, Sarawak and end in Cameron Highland, Peninsular Malaysia. Participants can book their return flight from Kuala Lumpur.

Please block the date and make early registration to secure seats on internal flights and accommodation in small towns at: IMCG - Hans Joosten: joosten@uni-greifswald.de GEC - Julia Lo: julialo@gec.org.my

Registration forms and more information under: http://www.imcg.net/pages/events/imcg2016.php

News from our regions

Reporting from New Zealand

Bev Clarkson: Clarksonb@landcareresearch.co.nz

Society of Ecological Restoration symposium

A symposium summarising peatland restoration around the world was held on 24 August 2015 at the Society of Restoration (SER) conference in Manchester, UK, organised by Line Rochefort (IMCG Main Board member), Canada, and Roxanne Anderson, Scotland http://www.ser2015.org/outline-programme. Speakers summarised updates on recent research and outcomes from both northern and southern hemispheres, including Northern Europe, Western Europe, the Baltic countries, North America and Australasia. It was interesting to hear that many approaches are similar throughout the

world despite differences in species composition, climate and threats. For example, thresholds of *c.* 10% of *Sphagnum* remaining were required for unassisted *Sphagnum* recovery in burnt Australian alpine bogs (work of Jennie Whinam and Roger Good), which were similar to thresholds for *Sphagnum* recovery in damaged English bogs. Presenters have been invited to write up the research as contributed papers for the SER journal Restoration Ecology.

News snippets from all over

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

Peat destruction, soil subsidence and flooding in **South East Asia**: Impressive video on land loss by peatland drainage: https://www.youtube.com/watch?v=FhLkBGYl_tw

Scotland publishes National Peatland Plan:
http://www.snh.gov.uk/climate-change/taking-action/carbon-management/peatland-action/national-peatland-plan/
http://www.stornowaygazette.co.uk/news/local-headlines/national-plan-to-protect-peatland-areas-1-3876458
http://www.bbc.com/news/uk-scotland-highlands-islands-34084180
http://www.iucn-uk-peatlandprogramme.org/node/2227

One million hectares of peatland in Sumatra (**Indonesia**) damaged by fire: http://en.tempo.co/read/news/2015/09/02/055697215/1-Million-Hectares-of-Peatland-in-Sumatra-Damaged-By-Fire

Earth Observation to measure peatland integrity and restoration prioritization for **Northern Ireland** Water: http://www.realwire.com/releases/Rezatec-uses-Earth-Observation-to-measure-peatland-integrity-and-restoration

Ambitious Spruce and Peatland Responses Under Climatic and Environmental Change (SPRUCE) experiment started in the Marcell Experimental Forest (Minnesota, **USA**):
http://www.eurekalert.org/pub_releases/2015-08/ufs--fri082515.php
http://www.nature.com/news/minnesota-bog-study-turns-up-the-heat-on-peat-1.18235

Mining company denies to peatland scientist to sample around proposed copper-nickel mine in Minnesota (**USA**): https://www.minnpost.com/environment/2015/08/polymet-denies-access-wetlands-research-u-m-scientist

Indonesian Forum for the Environment collects regional complaints about losses caused by forest and peatland fires: http://www.thejakartapost.com/news/2015/09/02/walhi-gather-complaints-forest-fires.html

More money demanded from **Indonesia**n national budget to restore peatlands to prevent fires: http://www.thejakartapost.com/news/2015/08/31/red-tape-hampering-efforts-deal-with-forest-fires.html

Political economy of fire and haze: Moving to long-term solutions for forest and peatland conservation and restoration in **Indonesia**: http://blog.cifor.org/32534/political-economy-of-fire-and-haze-moving-to-long-term-solutions#.VfR_5JdK1Yo

Fear that new **Indonesia**n palm oil subsidy will undermine 'no-deforestation and no-peatland' policies: http://www.eco-business.com/news/will-indonesias-new-palm-oil-subsidy-undermine-no-deforestation-push/

"Notable shift away from business-as-usual in **Indonesia**'s plantation sector": Asia Pulp & Paper commits to retire 7,000 ha of commercial plantation to protect peatland in Sumatra:
https://www.asiapulppaper.com/news-media/press-releases/asia-pulp-paper-commits-first-ever-retirement-commercial-plantations-tropical-peatland-cut-carbon-emissions
http://news.mongabay.com/2015/08/app-to-clear-plantations-to-restore-peatlands/
http://www.lesprom.com/en/news/Asia_Pulp__Paper_commits_to_retire_7000_ha_of_commercial_plantation_areas_to_protect_peatlands_69468/
https://www.deltares.nl/en/projects/reducing-impact-plantation-operations-peatlands-indonesia-2/
http://www.wetlands.org/News/tabid/66/ID/4216/NEWS-Encouraging-first-step-but-still-a-long-way-to-go-for-APP-to-stop-peat-destruction.aspx
http://www.scoop.co.nz/stories/BU1508/S00558/cottonsoft-supports-asia-pulp-papers-commitment.htm

Contractor appointed for Flow Country Sutherland field centre (**Scotland**): http://www.scottishconstructionnow.com/7658/contractor-appointed-for-sutherland-field-centre/

Volkswagen funds peatland restoration in **Poland**: http://www.4-traders.com/VOLKSWAGEN-AG-436737/news/Volkswagen--NABU-and-Volkswagen-Financial-Services-International-Peatland-Conservation-Fund-picks-u-20883793/

Plans for resin and wax extraction from peatland in **New Zealand**:
http://www.radionz.co.nz/news/regional/282933/northland-iwi-looks-at-peat-mining-proposal

Wetland restoration seminar

Final Seminar, Life to ad(d)mire
November 3–5, 2015
Värnamo and Store Mosse National Park, Sweden

Everyone interested in peatland restoration are invited to join the Final Seminar of LIFE+ project Life to ad(d)mire wetlands and restoration initiatives. The main topics at the seminar will be:

- planning and performing hydrological restoration actions,
- vegetative restoration in wetlands, and
- positive effects of wetland restoration.

There will be field trips to Store Mosse National Park and other large bogs that have been restored within the project. The event will take place from 3–5 November 2015 in Värnamo, Sweden.

Life to ad(d)mire is a LIFE+ Nature project that specialized in restoring hydrology within mires, fens and bogs. The project has restored 3 500 hectares of drained mires and wetlands at 35 sites throughout Sweden.

Registration at www.lifetoaddmire.se Choose “Final Seminar” in the left column to get to the registration form.

C-PEAT Workshop in New York in October

US scientists are organizing a workshop to bring together experts interested in peats from any regions in the world and over time periods from pre-Quaternary to the Holocene and recent

centuries. The overall goal of the workshop is to facilitate research coordination and the synthesis of knowledge and data on peat accumulation processes and histories on Earth.

The workshop will be held at Lamont-Doherty Earth Observatory of Columbia University, Palisades, New York (www.ldeo.columbia.edu) on 11 - 13 October 2015. The workshop is to launch the new C-PEAT (Carbon in Peat on EArth through Time) Working Group within PAGES; supported by INQUA (Holocene Global Peatland Carbon Dynamics project). More information can be found at www.pages-igbp.org/calendar/2014/127-pages/1502-c-peat-launch-wshop. We especially encourage early career scientists to participate. Some funding is available to support early career scientists as well as to cover on-site expenses. For more information contact Zicheng Yu, Dept. of Earth and Environmental Sciences, Lehigh University, phone: +1(610)758-6751, email: ziy2 (at) lehigh.edu

Wetlands Course in Wageningen, Netherlands

A course on "Wetlands, integrated water resources management and food security 2016" is organized by the Centre for Development Innovation, Wageningen UR for 2016. Interested candidates can apply to Centre for Development Innovation, Wageningen UR for admission to the training. Course dates are 30 May - 17 June 2016, deadlines 20 October (fellowships), final 17 April 2016. This course has been designed for wetland managers; including river basin and land-use planners; for policymakers, consultants, researchers, NGO and company staff involved with IWRM, wetlands and food security; and for those who wish to become a (better) water steward. To be able to act as a water steward and to advocate for wetlands, you will also need to know how to facilitate multi-stakeholder processes, how to communicate wetlands to different sectors and to use your negotiation skills. Proficiency in English is required. Tuition fee: 3875 €. For more information see www.wageningenur.nl/en/show/cdicourse_wetlands_2016.htm . For fellowships please check www.studyinholland.nl/scholarships/scholarships-administered-by-nuffic .

Peatland conservation relevant papers

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

1. Soil thermal buffer and regeneration niche may favour calcareous fen resilience to climate change: https://www.researchgate.net/publication/280246837_Soil_thermal_buffer_and_regeneration_niche_may_favour_calcareous_fen_resilience_to_climate_change
2. MoorFutures® Integration of additional ecosystem services (incuding biodiversity) into carbon credits – standard, methodology and transferability to other regions: https://www.bfn.de/fileadmin/BfN/service/Dokumente/skripten/skript407.pdf
3. Functional traits as a new approach for interpreting testate amoeba palaeo-records in peatlands and assessing the causes and consequences of past changes in species composition: http://hol.sagepub.com/content/25/9/1375?etoc
4. Peatland paleohydrology in the southern West Siberian Lowlands: Comparison of multiple testate amoeba transfer functions, sites, and Sphagnum $\delta^{13}C$ values: http://hol.sagepub.com/content/25/9/1425?etoc
5. What happens to soil organic carbon as coastal marsh ecosystems change in response to increasing salinity? An exploration using ramped pyrolysis: http://onlinelibrary.wiley.com/doi/10.1002/2015GC005839/abstract?campaign=woletoc
6. Algae alleviate carbon limitation of heterotrophic bacteria in a boreal peatland: http://onlinelibrary.wiley.com/doi/10.1111/1365-2745.12455/abstract?campaign=woletoc

7. Early Paleogene wildfires in peat-forming environments at Schöningen, Germany: http://www.sciencedirect.com/science/article/pii/S0031018215003764
8. Holocene climate change in central–eastern Brazil reconstructed using pollen and geochemical records of Pau de Fruta mire (Serra do Espinhaço Meridional, Minas Gerais): http://www.sciencedirect.com/science/article/pii/S0031018215003946
9. Differences in hydrophyte life forms induce spatial heterogeneity of CH_4 production and its carbon isotopic signature in a temperate bog peatland: http://onlinelibrary.wiley.com/doi/10.1002/2014JG002881/abstract?campaign=woletoc
10. Modeling impacts of changes in temperature and water table on C gas fluxes in an Alaskan peatland: http://onlinelibrary.wiley.com/doi/10.1002/2014JG002880/abstract?campaign=woletoc
11. Ecosystem CO2 and CH4 exchange in a mixed tundra and a fen within a hydrologically diverse Arctic landscape: 1. Modeling versus measurements: http://onlinelibrary.wiley.com/doi/10.1002/2014JG002888/abstract?campaign=woletoc
12. The 'Little Ice Age' in the Southern Hemisphere in the context of the last 3000 years: Peat-based proxy-climate data from Tierra del Fuego: http://hol.sagepub.com/content/24/12/1649.abstract
13. Global change pressures on soils from land use and management: http://onlinelibrary.wiley.com/doi/10.1111/gcb.13068/abstract?campaign=wolacceptedarticle
14. The 5.2 ka climate event: Evidence from stable isotope and multi-proxy palaeoecological peatland records in Ireland: http://www.sciencedirect.com/science/article/pii/S0277379115300652
15. Spatial variability of tephra and carbon accumulation in a Holocene peatland: http://www.sciencedirect.com/science/article/pii/S0277379115300640
16. Minnesota bog study turns up the heat on peat: http://www.nature.com/news/minnesota-bog-study-turns-up-the-heat-on-peat-1.18235?WT.ec_id=NATURE-20150827&spMailingID=49408427&spUserID=MjA1NzQ2NTQyNwS2&spJobID=743993671&spReportId=NzQzOTkzNjcxS0
17. Climate-induced warming imposes a threat to North European spring ecosystems: http://onlinelibrary.wiley.com/doi/10.1111/gcb.13067/abstract?campaign=wolacceptedarticle
18. Indonesia's blue carbon: a globally significant and vulnerable sink for seagrass and mangrove carbon: http://link.springer.com/article/10.1007%2Fs11273-015-9446-y
19. Wading bird guano enrichment of soil nutrients in tree islands of the Florida Everglades: http://www.sciencedirect.com/science/article/pii/S0048969715301480
20. High fluvial export of dissolved organic nitrogen from a peatland catchment with elevated inorganic nitrogen deposition: http://www.sciencedirect.com/science/article/pii/S0048969715302680
21. Hydrological responses of a valley-bottom wetland to land-use/land-cover change in a South African catchment: making a case for wetland restoration: http://onlinelibrary.wiley.com/doi/10.1111/rec.12251/abstract?campaign=wolearlyview
22. Fire emissions and regional air quality impacts from fires in oil palm, timber, and logging concessions in Indonesia: http://iopscience.iop.org/article/10.1088/1748-9326/10/8/085005
23. Simultaneous high C fixation and high C emissions in *Sphagnum* mires: http://www.biogeosciences.net/12/4739/2015/bg-12-4739-2015.html
24. Calcium intolerance of fen mosses: Physiological evidence, effects of nutrient availability and successional drivers: http://www.sciencedirect.com/science/article/pii/S1433831915000645

25. Lateral carbon fluxes and CO2 outgassing from a tropical peat-draining river: http://www.biogeosciences-discuss.net/12/10389/2015/bgd-12-10389-2015.html
26. Research agendas for the sustainable management of tropical peatland in Malaysia: http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9546052&fileId=S0376892914000034
27. A simple CO_2 exchange model simulates the seasonal leaf area development of peatland sedges: http://www.sciencedirect.com/science/article/pii/S0304380015003142
28. Thermo-erosion gullies boost the transition from wet to mesic vegetation: http://www.biogeosciences-discuss.net/12/12191/2015/bgd-12-12191-2015.html
29. Bibliographie : Puits et sources de carbone dans les tourbières: http://pole-tourbieres.us9.list-manage1.com/track/click?u=7ae9da62643c5475ac4beeb39&id=c32c5f405f&e=b289e8a7a7
30. Prise en compte du KTH dans les objectifs de gestion d'une tourbière: http://www.pole-tourbieres.org/IMG/UserFiles/Files/fiche-KTH-hd.pdf
31. L'utilisation de vecteurs légers aéroportés et de drones pour la modélisation 3D des zones humides: http://www.pole-tourbieres.org/IMG/UserFiles/Files/fiche-KAP-HD.pdf
32. Bibliographie : L'élevage, un moyen de gestion des tourbières: http://pole-tourbieres.us9.list-manage.com/track/click?u=7ae9da62643c5475ac4beeb39&id=ba91173170&e=b289e8a7a7
33. Bibliographie : Fonctionnement biogéochimique des tourbières: http://pole-tourbieres.us9.list-manage.com/track/click?u=7ae9da62643c5475ac4beeb39&id=eb8f3fb24a&e=b289e8a7a7
34. Pollen as nutrient source in Holocene ombrotrophic bogs: http://www.sciencedirect.com/science/article/pii/S0034666715001281
35. Organic soils in Germany, their distribution and carbon stocks: http://www.sciencedirect.com/science/article/pii/S0341816215300126
36. The greenhouse gas balance of a drained fen peatland is mainly controlled by land-use rather than soil organic carbon content: http://www.biogeosciences.net/12/5161/2015/bg-12-5161-2015.html
37. Scotland's National Peatland Plan: http://www.snh.gov.uk/docs/A1697542.pdf
38. Quantifying landscape-level methane fluxes in subarctic Finland using a multiscale approach: http://onlinelibrary.wiley.com/doi/10.1111/gcb.12975/abstract?campaign=woletoc
39. Northward displacement of optimal climate conditions for ecotypes of *Eriophorum vaginatum* L. across a latitudinal gradient in Alaska: http://onlinelibrary.wiley.com/doi/10.1111/gcb.12991/abstract?campaign=woletoc
40. Bridging the gap between models and measurements of peat hydraulic conductivity: http://onlinelibrary.wiley.com/doi/10.1002/2015WR017264/full

Please send your contribution to the IMCG Bulletin by the 25th of each month: peatland@mweb.co.za