

CINDERELLA-Update VI

19th of February 2016, W. Wichtmann

“Comparative analysis, integration and exemplary implementation of climate smart land use practices on organic soils: progressing paludicultures after centuries of peatland destruction and neglect”

By irregular updates the CINDERELLA community and colleagues are informed about dates, news and other interesting issues within the scope of the CINDERELLA project, ref. paludiculture.

All partners are kindly asked to provide some current information which can be inserted here. The idea is to keep all partners informed on the same level, to exchange information, to ask project related current questions, to prepare meetings and to make appointments as well as to prepare common activities (publications, new projects, etc.).

Conferences and workshops (upcoming)

Montpellier

The 5th International EcoSummit Congress, EcoSummit 2016 will take place from 29 August – 1 September 2016. Several colleagues submitted abstracts to the session on paludiculture. <http://www.ecosummit2016.org/>. The **deadline for submission has been prolonged until 19th** of February. An overview on submitted abstracts will be available soon after closing of the submission. The plan is to use this event for a meeting of project partners.

All partners are asked for support for the organisation of the paludiculture round table which will be additionally to the scientific session on paludiculture. Please make proposals on contents, experts and politicians to be invited and please give other useful comments and proposals.

Potsdam

The 11th annual European Chapter meeting of the Society of Wetlands Scientists (SWS) (<http://www.sws.org/europe-chapter>) will be held in Potsdam near Berlin, Germany, 17-20 May 2016. The deadline for abstract submission will be February 23, 2016.

Tulcea

The Romanian Limnogeographical Association (RLA) in collaboration with the German Limnological Society (GLS), Polish Limnological Society (PLS), Danube Delta National Institute Tulcea (DDNI) and the Danube Delta Biosphere Reserve Authority (DDBRA) invite to take part in the 3rd International Conference “Water resources and wetlands” set to take place between 8-10 September, 2016 in the “Delta” Hotel in Tulcea, Romania. If you did not register yet you still have the chance of joining the party - new deadline for Registration and Abstract Submission – 29 February 2016.

Open call

The FACCE -call ERA-Gas: "monitoring and Mitigation of GHG from Agri-and silviculture" has just been announced: <https://www.faccejpi.com/FACCE-Joint-activities/ERA-GAS/ERA-GAS-call-pre-announcement>. Maybe this is interesting for some partners as a basis for further cooperation?

News from the project

Cinderella EU Legislation Initiative

In December 2015 we started the initiative to raise attention for existing obstacles within the EU agricultural legislation hindering the implementation of paludiculture. We therefore drafted a letter to be addressed to the national ministries of agriculture. It contains the descriptions of obstacles and recommends solutions. We shared the draft with our partners (email 23.12.2015), asking for feedback.

With the Danish partners we have already agreed on the letter content. The letter is now being translated into Danish. The Dutch partners are in the process of incorporating other subjects (especially water retention and flood protection) into the draft. Please give us your feedback resp. recommendations soon as we want to discuss the ministries responses during our CINDERELLA meeting in May 2016. Will it be necessary in your opinion to translate the letter from English into your national language? Please contact: wendelin.wichtmann@uni-greifswald.de or laura.koelsch@paludikultur.de

Typha harvest in polder Kamp

In the polder Kamp near Anklam, Mecklenburg Vorpommern, Northeast Germany harvesting of Typha was planned to get biomass for cavity wall or blow in insulation. Aldert van Weeren, an investor from the Netherlands will use this material for the renovation of a holiday cottage nearby. First tests to harvest Typha with a thatch farmers harvester did not operate. The mowing device worked rather well, but uptake and bundling of plants was not possible. The biomass from up to 1 ha then was started to be harvested by hand with some helpers mid of February.

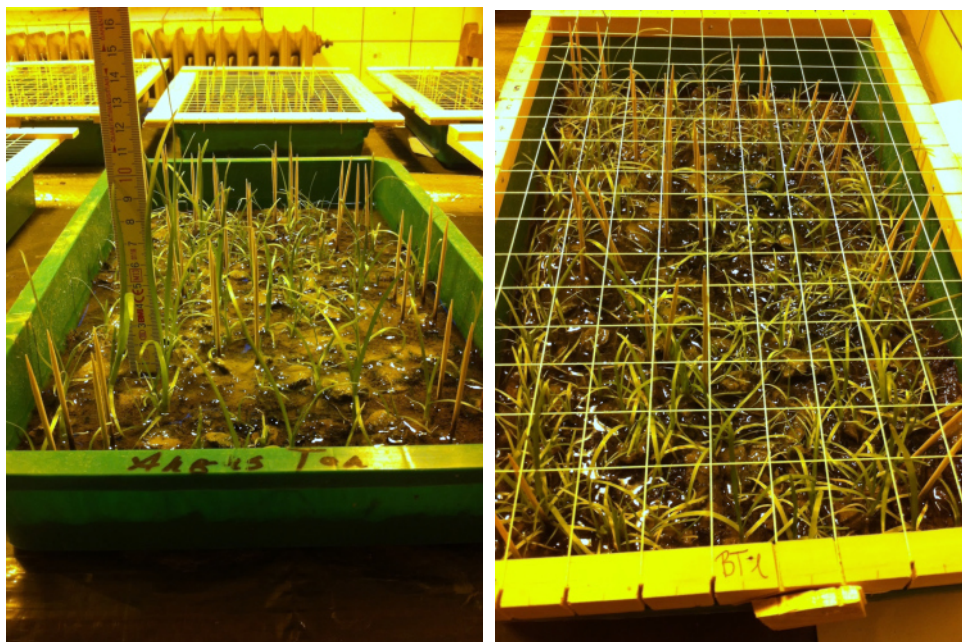


Figure: Overview on harvesting site (left) and transport of big bags out of the field (right); A. Haberl

Seed experiments with Typha

Some experiments on different methods for sowing Typha were conducted in the lab at Greifswald University. Best results of the seedling experiments with *Typha angustifolia* and *Typha latifolia* showed experiments with clay-prepared seeds on common substrate, normally used by gardeners. Both species did not grow very well on starter substrate. It took almost 10 weeks to get seedlings with approximately 10 cm height.

The cultivation experiment of *Typha angustifolia* in cooperation with a farmer in Ueckermünde (promoted by the Ostseestiftung) will be installed during spring. For that reason we will need to grow approximately 600 seedlings in Greifswald at the Botanical Garden. More information: Nora Köhn nk103053@uni-greifswald.de and Claudia Oehmke <oehmke@paludikultur.de>



Figures: Seedlings from *Typha angustifolia* (left) and *Typha latifolia* (right); C. Oehmke

Christian Schroeder, Claudia Oehmke, Carla Lambertini and other project staff participated in the Typha workshop in Nijmegen which was organized by colleagues from Radboud University on 13th of January. It was a very inspiring event with lot of exchange of practical and scientific experience. The workshop focused on results and experiences with Typha cultivation. The Greifswald team presented the experimental set-up of the Typha cultivation planned for this year in Ueckermünde and gave some information about the seedling experiments we have started in Greifswald (see above).

Project meeting in Denmark

It turned out that May would be a very good time to meet in Denmark (the weather is usually nice), Brian Sorell from Aarhus University now started planning for this project meeting. He proposed Week 21 (the week of 23rd-27th May). A timetable will be developed soon, clearly the main aim will be for the groups to present their progress so far. We could have meetings starting on Tuesday, allowing people to travel to Aarhus on Monday, and travel home on Wednesday via some wetlands and visit the Aarhus University research farm, where Cinderella experiments are conducted. That still leaves

Thursday in case anyone wants to stay longer to sample, or people wanting to come longer could also come earlier in the previous weekend if desired. Brian needs to confirm dates as soon as possible to be sure before the availability of a meeting location can be checked. The program will consider that several participants can leave to the Netherlands already on 26th evening to take part in the retirement event of Ab Grootjans.

Recent publications where members from Greifswald Mire Centre are involved

- Artz, R., Saunders, M., Yeluripati, J., Chapman, S., Moxley, J., Malcolm, H. & Couwenberg, J. (2015). Implications for longer-term policy and implementation into the AFOLU Inventory of the IPCC 2013 Supplement to the 2006 Guidelines: Wetlands. *ClimateXChange - Scotland's Centre of Expertise on Climate Change Research and Policy*, 53 p.
- Banwart, S.A., Black, H., Cai, Z., Gicheru, P., Joosten, H., Victoria, R., Milne, E., Noellemeyer, E. & Pascual, U. 2015. Executive summary. In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. *Soil Carbon: Science, management and policy for multiple benefits*. SCOPE Series Vol. 71. CABI, Wallingford, UK, pp. xxi-xxvii
- Banwart, S.A., Black, H., Cai, Z., Gicheru, P., Joosten, H., Victoria, R., Milne, E., Noellemeyer, E. & Pascual, U. 2015. The global challenge for soil carbon. In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. *Soil Carbon: Science, management and policy for multiple benefits*. SCOPE Series Vol. 71. CABI, Wallingford, UK, pp. 1-9.
- Barthelmes, A., Ballhorn, U. & Couwenberg, J. 2015. Consulting Study 5: Practical guidance on locating and delineating peatlands and other organic soils in the tropics. *The High Carbon Stock Science Study 2015*, 120 p.
- Barthelmes, A., Couwenberg, J., Risager, M., Tegetmeyer, C. & Joosten, H. 2015. Peatlands and climate in a Ramsar context - A Nordic-Baltic perspective. *TemaNord 2015:544*. Nordic Council of Ministers, 244 p.
- Bonn, A., Berghöfer, A., Couwenberg, J., Drössler, M., Jensen, R., Kantelhardt, J., Luthardt, V., Permien, T., Röder, N., Schaller, L., Schweppe-Kraft, B., Tanneberger, F., Trepel, M. & Wichmann, S. 2015. Klimaschutz durch Wiedervernässung von kohlenstoffreichen Böden. In: Hartje, V., Wüstemann, H. & Bonn, A. (eds.): *Naturkapital und Klimapolitik – Synergien und Konflikte*. Technische Universität Berlin, Helmholtz-Zentrum für Umweltforschung – UFZ. Berlin, Leipzig, pp. 124-147.
- Camarsa, G., Toland, J., Hudson, T., Nottingham, S., Jones, W., Eldridge, J., Severon, M., Rose, C., Sliva, J., Joosten, H. & Thévignot, C. 2015. LIFE and climate change mitigation. Publications Office of the European Union, Luxembourg, 90 p.
- de Klerk, P., Couwenberg, J. & Joosten, H. 2015. Pollen and microfossils attributable to *Fagopyrum* in western Eurasia prior to the late Medieval: an intercontinental mystery, *Palaeogeography, Palaeoclimatology, Palaeoecology* 440: 1-21. doi: 10.1016/j.palaeo.2015.08.024
- Dommain, R., Cobb, A. R., Joosten, H., Glaser, P.H., Chua, Amy F. L., Gandois, L., Kai, F.-M., Noren, A., Salim, K. A., Su'ut, N. S. H. & Harvey, C. F. (2015). Forest dynamics and tip-up pools drive pulses of high carbon accumulation rates in a tropical peat dome in Borneo (Southeast Asia). *J. Geophys. Res. Biogeosci.*, 120, doi:10.1002/2014JG002796.
- Funk, R. Pascual, U., Joosten, H., Duffy, C., Pan, G., la Scala, N., Gottschalk, P., Banwart, S.A., Batjes, N., Cai, Z., Six, J. & Noellemeyer, E. 2015. From potential to implementation: an innovation framework to realise the benefits of soil carbon. In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. *Soil Carbon: Science, management and policy for multiple benefits*. SCOPE Series Vol. 71. CABI, Wallingford, UK, pp. 47-59.
- Gao, Y. & Couwenberg, J. 2015. Carbon accumulation in a permafrost polygon peatland: steady long-term rates in spite of shifts between dry and wet conditions. *Global Change Biology* 21: 803–815.

- Grootjans, A.P., Jansen, A.J.M., de Hullu, P.C., Joosten, H., Bootsma, A. & Grundling, P.-L. 2015. In search of spring mires in Namibia: the Waterberg area revisited. *Mires and Peat* 15: Art. 10. (Online: <http://www.mires-and-peat.net/pages/volumes/map15/map1510.php>)
- Grootjans, A.P., Janssen, A.J.M. & Joosten, J.H.J. 2015. Bargerveen Externe audit 2014. Staatsbosbeheer, 58 p.
- Joosten, H. 2015. Current soil carbon loss and land degradation globally – where are the hotspots and why there? In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. *Soil Carbon: Science, management and policy for multiple benefits*. SCOPE Series Vol. 71. CABI, Wallingford, UK, pp. 224-234.
- Joosten, H. 2015. Peatlands, climate change mitigation and biodiversity conservation. An issue brief on the importance of peatlands for carbon and biodiversity conservation and the role of drained peatlands as greenhouse gas emission hotspots. Nordic Council of Ministers, 16 p.
- Joosten, H., Berghöfer, A., Couwenberg, J., Dietrich, K., Holsten, B., Permien, T., Schäfer, A., Tanneberger, F., Trepel, M. & Wahren, A. 2015. Die neuen MoorFutures® - Kohlenstoffzertifikate mit ökologischen Zusatzleistungen. *Natur und Landschaft* 90: 170-175.
- Joosten, H., Brust, K., Couwenberg, J., Gerner, A., Holsten, B., Permien, T., Schäfer, A., Tanneberger, F., Trepel, M. & Wahren, A. 2015. MoorFutures® Integration of additional ecosystem services (including biodiversity) into carbon credits – standard, methodology and transferability to other regions. BfN Skripten 407, Bundesamt für Naturschutz, Bonn, 119 p.
- Joosten, H., Gaudig, G., Krawczynski, R., Tanneberger, F., Wichmann, S. & Wichtmann, W. 2015. Managing soil carbon in Europe: paludicultures as a new perspective for peatlands. In: Banwart, S. A., Noellemeyer, E., Milne, E., eds. *Soil Carbon: Science, management and policy for multiple benefits*. SCOPE Series Vol. 71. CABI, Wallingford, UK, pp. 297-306.
- Kloskowski, J., Tanneberger, F., Marczakiewicz, P., Wiśniewska, A. & Choynowska, A. 2015. Optimal habitat conditions for the globally threatened Aquatic Warbler *Acrocephalus paludicola* in eastern Poland and their implications for fen management. *Ibis* DOI: 10.1111/ibi.12247
- Krebs, M., Gaudig, G., Wichmann, S. & Joosten, H. 2015. Torfmooskultivierung: Moorschutz durch Moornutzung. *Telma* Beiheft 5: 59-70.
- Minke, M., Augustin, J., Burlo, A., Yarmashuk, T., Chuvashova, H., Thiele, A., Freibauer, A., Tikhonov, V. & Hoffmann, M. 2015. Water level, vegetation composition and plant productivity explain greenhouse gas fluxes in temperate cutover fens after inundation. *Biogeosciences Discuss.* 12, 17393–17452
- Milne, E., Banwart, S. A., Noellemeyer, E., Abson, D. J., Ballabio, C., Bampa, F., Bationo, A., Batjes, N. H., Bernoux, M., Bhattacharyya, T., Black, H., Buschiazzi, D. E., Cai, Z., Cerri, C. E., Cheng, K., Compagnone, C., Conant, R., Coutinho, H. L.C., de Brogniez, D., de Carvalho Balieiro, F., Duffy, C., Feller, C., Fidalgo, E.C.C., Figueira da Silva, C., Funk, R., Gaudig, G., Gicheru, P. T., Goldhaber, M., Gottschalk, P., Goulet, F., Goverse, T., Grathwohl, P., Joosten, H., Kamoni, P. T., Kihara, J., Krawczynski, R., La Scala Jr, N., Lemanceau, P., Li, L., Li Z., Maron, P.-A., Martius, C., Melillo, J., Montanarella, L., Nikolaidis, N., Nziguheba, G., Pan, G., Pascual, U., Paustian, K., Piñeiro, G., Powlson, D., Quiroga, A., Richter, D., Sigwalt, A., Six, J., Smith, J., Smith, P., Stocking, M., Tanneberger, F., Termansen, M., van Noordwijk, M., van Wesemael, B., Vargas, R., Victoria, R. L., Waswa, B., Werner, D., Wichmann, S., Wichtmann, W., Zhang, X., Zhao, Y., Zheng, J. & Zheng, J. 2015. Soil carbon, multiple benefits. *Environmental Development* 13: 33–38.
- Mrotzek, A. 2015: Paläobotanische Untersuchungen zur Vegetationsgeschichte der Insel Vilm. Gehlhar, U. & Knapp, H.D. (ed.): *Erste Ergebnisse der Naturwaldforschung im Naturwaldreservat Insel Vilm*, BfN-Skripten 390, Bonn-Bad Godesberg, 53-73.
- Muster, C., Gaudig, G., Krebs, M. & Joosten, H. 2015. Sphagnum farming: the promised land for peat bog species? *Biodiversity and Conservation* 24: 1989-2009.
- Nguyen, T.D., de Klerk, P. & Joosten, H. 2015. Presence of *Camptotheca* in the Red River Delta (North Vietnam) during the Holocene revealed by palynological studies. *European Journal of Medicinal Plants* 5: 260-271.

- Nziguheba, G., Vargas, R., Bationo, A., Black, H., Buschiazzi, D., de Brogniez, D., Joosten, H., Melillo, J., Richter, D. & Termansen, M. 2015. Soil carbon, a critical natural resource – long-term goals, short-term actions. In: Banwart, S. A., Noellemeier, E., Milne, E., eds. Soil Carbon: Science, management and policy for multiple benefits. SCOPE Series Vol. 71. CABI, Wallingford, UK, pp. 10-25.
- Raison, J., Atkinson, P., Chave, J., DeFries, R., Goh, K.J., Joosten, H., Navratil, P. & Siegert, F. 2015. Extended Summary. HCS+: A new pathway to sustainable oil palm development. The High Carbon Stock Science Study, pp. 9-22.
- Raison, J., Atkinson, P., Chave, J., DeFries, R., Goh, K.J., Joosten, H., Navratil, P. & Siegert, F. 2015. Part 2: Synthesis Report. HCS+: A new pathway to sustainable oil palm development. The High Carbon Stock Science Study, pp. 23-74.
- Raison, J., Atkinson, P., Chave, J., DeFries, R., Goh, K.J., Joosten, H., Navratil, P. & Siegert, F. 2015. Part 3: Gabon Case Study. The HCS+ methodology tested on the ground. The High Carbon Stock Science Study, pp. 75-104.
- Scharnweber, T., Couwenberg, J., Heinrich, I. & Wilmking, M. 2015. New insights for the interpretation of ancient bog oak chronologies? Reactions of oak (*Quercus robur* L.) to a sudden peatland rewetting. *Palaeogeography, Palaeoclimatology, Palaeoecology* 417: 534–543.
- Schröder, C., Dahms, T., Paulitz, J., Wichtmann, W. & Wichmann, S. 2015. Towards large-scale paludiculture: addressing the challenges of biomass harvesting in wet and rewetted peatlands. *Mires and Peat*, Volume 16 (2015), Article 13, 1–18, <http://www.mires-and-peat.net/>, ISSN 1819-754X
- Schröder, C. & Schroeder, P. 2015. Wärme aus wiedervernässten Mooren. *LandInForm* 1: 38-39.
- Wichmann, S. & Köbbing, J.F. (2015) Common reed for thatching—A first review of the European market. *Industrial Crops and Products* 77, 1063–1073.
- van Duinen, G.-J., Fritz, C. & Couwenberg, J. 2015. Effecten van herstelmaatregelen op vastlegging en emissie van broeikasgassen in de Deurnsche Peel en Mariapeel. Stichting Bargerveen, Nijmegen, 35 p.
- von Unger, M, Emmer, I., Joosten, H. & Couwenberg, J. 2015. Peatlands, forests and the climate architecture: Setting incentives through markets and enhanced accounting. German Emissions Trading Authority (DEHSt), Berlin, 131 p.